STATE OF CALIFORNIA
SAN FRANCISCO
CIVIC CENTER COMPLEX
Draft Environmental Impact Report

November 4, 1994

Prepared for:
San Francisco State Building Authority

and

State of California
Department of General Services
Office of Project Development and Management
400 R Street, Suite 5100
Sacramento, California 95814

ESA

STATE OF CALIFORNIA—STATE AND CONSUMER SERVICES AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF GENERAL SERVICES
OFFICE OF PROJECT DEVELOPMENT AND MANAGEMENT
400 R STREET, SUITE 5100
SACRAMENTO, CA 95814

DATE: November 7, 1994

TO: Responsible and Reviewing Agencies
Interested Parties, Organizations and Individuals

SUBJECT: Notice of Availability of a Draft Environmental Impact Report for the State of California San Francisco Civic Center Complex

CO-LEAD AGENCIES: San Francisco State Building Authority and
California Department of General Services
400 R Street, Suite 5100
Sacramento, CA 95814

FAX: (916) 322-3987, (916) 324-4257, or (916) 324-0325

CONTACT: Christal Waters, Senior Environmental Planner; phone (916) 324-0206

Project Location: The proposed project is in San Francisco, north of the Civic Center, on the block bounded by McAllister St., Polk Street, Golden Gate Avenue, and Larkin Street. The project site includes Lots 2 and 3, which encompass the entire Assessor's Block 765.

Brief Description of the Proposed Project: The San Francisco State Building Authority and the Department of General Services are considering approval of the construction and operation of the San Francisco State Office Complex at the location identified above. The construction aspect of the project consists of renovation and reuse of the historic California State Building at 350 McAllister Street, the demolition of the adjacent Annex at 455 Golden Gate Avenue, and construction of a new building on the site of the demolished Annex. The new building would be directly connected to the renovated California State Building.

Document Available for Review: This Draft Environmental Impact Report (Draft EIR) is available for review by agencies and interested organizations and individuals for a 45-day review period starting November 7, 1994. Written comments should be submitted to the Department of General Services (DGS) no later than 5:00 PM December 21, 1994, to be considered by staff. Comments may be sent by FAX to the phone numbers listed above or mailed to the address listed above, Attention: Christal Waters, Office of Project Development and Management.

Copies of the Draft EIR: Copies of the Draft EIR may be reviewed at the following locations:

San Francisco Public Library
Main Library
Civic Center
San Francisco, CA 94102

(continued, next page)

City Clerk
City of San Francisco
City Hall
San Francisco, CA 94102

Copies of other environmental documents referenced in the Draft EIR are available along with the project Draft EIR at the Business Science and Document Department reference desk in the Main Library.

Draft EIR Public Hearing: During the review period, written and oral comments may be presented at a scheduled public hearing on the Draft EIR at 2:00 PM Tuesday, December 6, 1994 in the auditorium of the Edmund G. Brown State Office Building at 505 Van Ness Avenue. The auditorium is located inside and to the right of the courtyard, as accessed from the main entry to the building. Comments should be directed to the adequacy of the environmental impact report.

Summary of Environmental Effects: The Draft EIR identified significant unmitigated cumulative impacts in the areas of traffic, transit and air quality. The Draft EIR indicates that there are no unmitigated significant effects due to the project when it is considered by itself. Potentially significant project-specific impacts in the areas of cultural resources, noise, geology, public health and safety were mitigated below a level of significance. Project-specific impacts in the areas of land use, visual and design factors, solar access and shading, wind, traffic, transit, parking and circulation, air quality, population and housing have been identified as less than significant.

Project Approval: The San Francisco State Building Authority and the California Department of General Services will use the information provided in the Draft EIR to consider certification of a Final Environmental Impact Report (Final EIR). Comments, responses and any changes specified for the DEIR will be included in The Final EIR. The Final EIR will be presented to the San Francisco State Building Authority and the California Department of General Services for certification of its adequacy and compliance with the California Environmental Quality Act (CEQA) prior to implementation of the proposed project.

STATE OF CALIFORNIA
SAN FRANCISCO
CIVIC CENTER COMPLEX
Draft Environmental Impact Report

November 4, 1994

Prepared for:
San Francisco State Building Authority

and

State of California
Department of General Services
Office of Project Development and Management
400 R Street, Suite 5100
Sacramento, California 95814

Environmental Science Associates, Inc.

301 Brannan St.
Suite 200
San Francisco, California
94107-1811
(415) 896-5900

ESA

STATE OFFICE BUILDING

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

TABLE OF CONTENTS (Continued)

Page

LIST OF FIGURES (Continued)

LIST OF TABLES

TABLE OF CONTENTS (Continued)

Page

LIST OF TABLES (Continued)

INTRODUCTION

This Environmental Impact Report (EIR), for the purpose of analysis, evaluates the effects of development of the State of California Civic Center Complex on the McAllister - Polk - Golden Gate - Larkin blocks in San Francisco. The "project site" is the entire block. The project includes two major components: renovation and reuse of the currently vacant California State Building at 350 McAllister Street, and demolition of the Annex, the state office building at 455 Golden Gate Avenue and construction of a New State Office Building. The word "project," as used in this EIR, refers to both the California State Building and the New State Office Building. When one component of the project is discussed separately, it is specifically referenced.

Chapter III, Environmental Setting, Impacts and Mitigation, is organized in the following manner. Each topical section, such as Land Use Compatibility and Policy Conformity, is divided into two subsections: Setting, and Impacts and Mitigation. The Setting describes existing environmental conditions for that topic. Impacts and Mitigation is further divided into Significance Criteria, Impacts, and Mitigation. Significance Criteria are the thresholds for each topic beyond which the effect would be considered significant, or a substantial, adverse change in the physical environment, as defined in CEQA Guidelines Section 15002 (g) and 15382. Under Impacts, the text describes individual effects, numbered in a boldface summary, and whether the effects, would be "Not Significant," "Potentially Significant," or "Significant" in relation to the criteria. "Not Significant" includes project effects that would not exceed significance criteria defined for each topic. "Potentially Significant" effects are those that could occur if identified mitigation measures discussed were not included as part of the project. "Significant" effects are those which would exceed the identified significance criteria, regardless of mitigation measures incorporated in the project.

Under the Mitigation heading, the EIR identifies mitigation measures for each impact, keyed to the same numbering convention as for Impacts. That is, Mitigation F.1 would reduce or eliminate adverse effects of Impact F.1. Where effects are initially found to be not significant, the EIR either notes that no mitigation is required, or may identify mitigation to further reduce less-than-significant effects. Where mitigation measures are identified for potentially significant effects, the measure includes a summary statement of remaining significance, assuming the

mitigations were incorporated in the project: "Significance After Mitigation: Less-than-Significant."

This EIR incorporates some information from the *Mission Bay EIR, Final EIR* certified August 23, 1990; the *South of Market EIR, Final EIR* certified December 7, 1989; the *New Main Library EIR, Final EIR* certified February 27, 1992; and *San Francisco Courts Building EIR, Final EIR* certified June 23, 1994. Those documents, all prepared by the City of San Francisco as Lead Agency, are available for public review at the San Francisco Department of City Planning, 1660 Mission Street, San Francisco; and at the San Francisco Main Library and various branch libraries.

Incorporation by reference with a summary is pursuant to CEQA Section 21061 and 21100, and CEQA Guidelines 15150.

I. SUMMARY

A. PROJECT DESCRIPTION

Three major state-owned office buildings in the San Francisco Bay Area were vacated following the 1989 Loma Prieta earthquake: the California State Building at 350 McAllister Street and the 525 Golden Gate Avenue building, both in San Francisco, and the 1111 Jackson Street building in Oakland. The state agencies occupying those buildings were relocated to various leased space in existing buildings.

The State of California 1992 *San Francisco / Oakland State Facilities Plan* (the Plan) addresses the state's present and future facilities needs in the Bay Area. The Plan's goal is to provide consolidated state office space in San Francisco that would satisfy the 10-year growth needs of statewide-serving agencies in the Bay Area. Under this goal, statewide-agencies such as the Supreme Court and Appellate Courts and Judicial Administrative Offices; the Department of Industrial Relations; and the Department of Insurance would remain in San Francisco. Major local-serving state offices would also occupy the project, such as the Franchise Tax Board. State legislation enacted in September 1993, AB 896, statutes of 1993, Chapter 429 codified objectives of the Plan, including the intent to maintain a strong presence of state offices in San Francisco by locating statewide-serving agencies in the San Francisco Civic Center. To implement the Plan, the proposed project includes the development of office space in the San Francisco Civic Center, through the renovation and reuse of the historic California State Building at 350 McAllister Street, and the demolition of the adjacent Annex at 455 Golden Gate Avenue and construction of a new building. The project would accommodate approximately 2,500 employees, approximately 1,300 of whom worked at the site prior to the Loma Prieta earthquake in 1989. About 925 employees now work at the site, at the Annex.

The proposed site is in the San Francisco Civic Center and encompasses the full block bounded by McAllister Street to the south, Polk Street to the west, Golden Gate Avenue to the north, and Larkin Street to the east. The site is currently occupied by the 209,000-gross-sq.-ft., six-story California State Building and the 384,000-sq.-ft., seven-story Annex. The two buildings are connected through hallways in the center of the block.

The project would have a total of about 1,053,000 gross sq. ft., and about 460,000 gross sq. ft. of net new space. The proposed renovated California State Building would have a total of 208,000 gross sq. ft., and the Annex would be replaced with a 845,000 gross sq. ft. New State Office Building. The project would have 802,000 net sq. ft. (NSF) of usable space, 152,000 NSF in the renovated California State Building and 650,000 NSF in the New State Office Building. The new building would house agency office space, and about 60,000 NSF of special support space.

Architectural renovation of the California State Building would include the rehabilitation of the building's exterior historic facade, and the re-creation of portions of the roof in blue-gray slate tiles to match the original specifications. Other exterior renovation would include repair or recasting of portions of the terra-cotta "cheneau" or gutter at the cornice line; repair or replacement of damaged granite facing; repair or replacement of damaged decorative plaster ceilings in the entrance loggia; and matching the stucco surface on the secondary facades to the original granite-colored specifications. As part of interior renovation, the Supreme Court Room would be replicated based upon its original design, including the re-creation of the skylit, truncated-dome ceiling.

The major structural components of the proposed renovation would be reinforced concrete shear walls applied behind the primary facades facing Polk, McAllister and Larkin Streets, the north walls of the east, central, and west wings, and the east and west walls of the central wing, by removing existing interior wall surfaces. (If severe deterioration has occurred on the secondary facades, the existing walls may be demolished and replaced. Exterior decorative material would be salvaged and reused.) Where they intersect the perimeter walls, existing wall and ceiling surface materials would be removed for a four-foot-wide access area for this seismic construction. The project would re-use wood molding, paneling or cabinet work. The seismic work could affect interior dimensions of some rooms and, therefore, re-installation of moldings or paneling could require trimming dimensions of salvaged material. Original flat plaster walls and ceilings would be replaced with gypsum board and a matching plaster surface, where needed. Hollow-clay tile walls surround the main stairway, and life safety considerations in an exit area would require strengthening of those walls; the project would replace those walls and certain other interior walls with new concrete shear walls.

The proposed New State Office Building would range from 209 ft. and 16 stories at Golden Gate Avenue to about 140 ft. and 11 stories at the north side of the California State Building. The design is intended to taper down the new building from near the 300-ft. Federal Building north of

Golden Gate Avenue, to the south at the 80-ft. California State Building and other buildings of the Civic Center. The massing of the new building would be a series of elements of different height and plan dimension. The highest element would include the 16-story facade fronting Golden Gate Avenue. Moving from north to south, the second element would rise 15 stories. This element would include two atria, glass-enclosed spaces between the 5th and 15th levels on the east and west sides of the building core (elevators, washrooms, and mechanical and other service areas). The third element, with a curved facade facing the Civic Center, would rise to 14 stories, and the last element, adjacent to the California State Building, to 11 stories.

At street level, the New State Office Building would be built up to the property line on Golden Gate Avenue. A protected entry, extending most of the length of the building, would be provided on Golden Gate Avenue by twin arcades behind the columns of the north facade. On Polk and Larkin Streets, parts of the new building would reach the property line, while the south element would have setbacks that aligned with the California State Building.

The facades of the new building are intended to be a contemporary design compatible with the California State Building. The walls of the New State Office Building would be white granite (or its equivalent) and would be detailed at the base as a continuation of the base of the California State Building. Windows would have horizontal and vertical elements of granite or metallic finish aluminum. The atria would be roofed with a diffusing screen of glass and aluminum that would form a trellis extending over a portion of the roof garden at the 15th level. On Golden Gate Avenue, the project would include a 22-ft.-deep canopy that would extend almost the width from Polk to Larkin Streets, about 50 ft. above the sidewalk.

The proposed project would begin construction in September 1995, with occupancy beginning by November 1997. Full occupancy would be completed by May 1998. Direct construction costs are estimated to be approximately $200,000,000.

B. MAIN ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

Table S-1, Summary of Impacts and Mitigation Measures, pp. S-23 - S-34, lists major effects and mitigation measures proposed as part of the project.

LAND USE COMPATIBILITY AND POLICY CONFORMITY

The proposed project would be located in San Francisco's Civic Center, on the site now occupied by the California State Building and the Annex. Public, office, retail, performing arts and residential uses surround the project area. The project would conform with the existing public land uses on the site and would have a similar character to that of the surrounding public uses. The project would not disrupt or divide the neighborhood and would not create conflicts with existing land uses.

The proposed project would respond to the State's *San Francisco / Oakland State Facilities Plan*, which provides a guide for management and development of both state-owned and state-leased office facilities in the San Francisco Bay Area. Although the state project would not be formally subject to City of San Francisco Master Plan policies and City Planning Code regulations, those local policies and codes are reviewed for informational purposes. Master Plan elements that contain policies that would be relevant to the project include the Community Facilities Element, the Recreation and Open Space Element, the Transportation Element, the Urban Design Element, the Environmental Protection Element, and the Community Safety Element. The Planning Department is in the process of updating the *Civic Center Area Plan* of the *Master Plan*, which has historically defined the area as the government center of the City, consistent with the project.

The project site is in a P (Public) Use District in the San Francisco City Planning Code, which allows uses of governmental agencies. Under this zoning designation, the proposed project would be a principal permitted use for projects under City jurisdiction. The entire site is within a 80-X Height and Bulk District (80-ft. height limit, no bulk limit). There is no Floor-Area Ratio (FAR) limit in a P District. The New State Office Building, would exceed the 80-ft. existing height limit for the site in the San Francisco City Planning Code. Exceeding the height limit could create potential visual, shadow and wind effects, discussed elsewhere in the EIR.

Land use compatibility and policy conformity were not found to be significant environmental effects of the proposed project.

VISUAL AND DESIGN FACTORS

The project site includes two connected buildings: the California State Building, a six-story approximately 80-ft.-tall steel-frame building clad in Sierra White granite and terra-cotta, was completed in 1922 with wing additions completed in 1931; the Annex is a seven-story, concrete-

frame building clad with a variety of materials, including granite, ceramic tile, stucco and metal panels. Completed in 1957, the Annex design is a simplified "modern" style building.

The California State Building is visible from streets and sidewalks in the vicinity, including Civic Center Plaza from the south, Polk and Larkin Streets from as far out as Market Street, and McAllister Street to the east and west. The building is also visible from the Market, Hyde, Grove and Eighth Streets intersection.

The Annex is visible from Golden Gate Avenue, Polk near McAllister Street, and from Larkin near McAllister. Partial views of the Annex are available from Polk Street and Larkin Street, north of Golden Gate Avenue, or from Van Ness Avenue. Because the Annex is similar in height and to the north of the old State Building, only parts of its mechanical penthouses are visible from the Civic Center Plaza.

The project would renovate the exterior of the California State Building, repairing or replacing original architectural detail; views of that building from nearby streets or Civic Center Plaza would continue to show a Beaux Arts-style, six-story building framing the north side of Civic Center Plaza. The project would demolish the Annex and replace it with the New State Office Building. That new building would taper down in a series of elements, from 209 ft. and 16 stories at Golden Gate Avenue (across from the 300-ft., 20-story Phillip Burton Federal Building) to about 140 ft. and 11 stories at the north side of the California State Building. The New State Office Building materials would include white granite (or its equivalent), similar to facade materials of the California State Building and other older, Beaux Arts-style buildings in the Civic Center. The new building's massing and fenestration patterns would be a contemporary design. Views from locations in Civic Center Plaza and adjacent streets would include the New State Office Building as a series of stepped-back elements, rising above the California State Building. In many views, the New State Office Building would replace views of the uniform vertical facade of the Federal Building. The City Hall dome to the west would continue as a major visual landmark in the Civic Center. From Polk Street or Larkin Street, the stepped elements, set-backs, and glazed atria would be visible. Along Golden Gate Avenue, the New State Office Building would be a 16-story element; the vertical facade would be broken by a 22-ft.-wide canopy, 50 ft. above the sidewalk. This north facade would have varied window patterns, and a light-well feature in the center of the upper floors.

The tops of the existing state buildings are visible in the long-range view from Twin Peaks. From this view, the base of the building is partially obscured by the view of City Hall. The New

State Office Building would be visible in long-range views, such as from Twin Peaks, rising between the California State Building and the Federal Building.

Visual effects of the project would not be significant.

SOLAR ACCESS AND SHADING

The New State Office Building would cast mid-morning to early afternoon shadows on the Federal Building plaza, immediately north of the project site. In late summer, winter and spring months, existing and net new shadows would place most of that plaza in shade at noon. With the project, the plaza would remain in sun at noon in late spring to mid-summer. The project would also add shade to streets and sidewalks in the vicinity. Because the Federal Building plaza has limited open space value, related wind conditions (see Wind, below) and project shadows would not be expected to adversely affect use of the plaza.

The New State Office Building would not add new shade to Civic Center Plaza, an open space subject to City Planning Code Section 295. That code limits new building that would add shade to open space under jurisdiction of the San Francisco Recreation and Park Commission; the state project would not be formally subject to this City code. The project would add shade to approximately a 750-sq.-ft. area of United Nations Plaza for about 15 minutes, about one hour before sunset in June and July. Most of United Nations Plaza is in shade at these times.

Shadow effects of the project would not be significant.

WIND

The existing conditions near the site and vicinity can be characterized as very windy. It appears that the Philip Burton Federal Building, the 300-ft. office building north of the proposed project site, on the Golden Gate-Polk-Turk-Larkin block, controls the wind conditions in its vicinity. The Federal Building, a structure substantially higher than surrounding development, intercepts the winds that otherwise would pass overhead and brings them down to ground level, and tends to create accelerated wind conditions in its vicinity, including exceedences of the hazardous wind criterion, as defined by the City.

In wind-tunnel tests of the project vicinity, 29 of 38 test locations currently exceed the 11-mph pedestrian-comfort criterion. (The test locations were in the area generally bounded by Turk

Street, Van Ness Avenue, Fulton Street and Hyde Street.) Equivalent wind speeds in pedestrian areas surrounding the project site range from 9 to 23 mph.

All test locations currently exceed the 7-mph public seating criterion, including points in Civic Center Plaza or the Federal Building plaza.

The hazard 26 mph criterion is currently exceeded at six of the 38 test locations in the vicinity of the project site. One of the test locations exceeding the hazard criterion is located on the Golden Gate Avenue sidewalk at the proposed project site. The other five test locations exceeding the hazard criterion are in the block occupied by the Philip Burton Federal Building: on the corner of Polk Street and Golden Gate Avenue; on Golden Gate Avenue about halfway between Polk Street and Larkin Street; in the westerly part of the Federal Building plaza; near the southwest corner of the Federal Building; and at the corner of Turk Street and Larkin Street.

The wind environment with the project would be about the same, or improved overall, compared to existing conditions, with the project. With the project, and project plus other potential development in the vicinity, there would be a net two fewer exceedences of the City's 11 mph pedestrian comfort criterion than with existing conditions. With the project, and with the project plus potential development, three locations on the Federal Building block, of the six existing exceedence points, would continue to exceed the hazard criterion; project wind effects would eliminate existing hazard exceedence at three locations. The project would not cause an exceedence of the hazard criterion, and wind effects would not be significant.

CULTURAL RESOURCES

The California State Building, a Contributory building within the Civic Center National Register Historic District and National Historic Landmark District, was assigned the highest rating of "5" in the 1976 City of San Francisco Department of City Planning Architectural Inventory and the highest rating of "A" by the Foundation for San Francisco's Architectural Heritage. It is a Contributory building in the proposed local Civic Center Historic District. The California State Building is not a designated City landmark. The California State Building is also eligible for individual status on the National Register. The Annex is on the northern half of the project site, and is part of a grouping of Civic Center structures from the late 1950s. The Annex has not been designated as historically significant and has been listed as non-contributory in architectural surveys.

The proposed project would include renovation of the California State Building and replacement of the Annex with the New State Office Building. Exterior changes would include renovation or restoration of roof, facade decoration, and damaged materials on the McAllister, Polk, and Larkin frontages.

As presented in the Project Description, the project would include new shear walls on the interior of McAllister, Larkin and Polk facade of the California State Building. At those walls, one interior layer of brick and all interior finishes would be removed as well as those portions of the interior partitions, ceilings, and floors that are adjacent to the walls up to four ft. Removed flat plaster would be replaced with gypsum board with a plaster finish. Decorative finishes would be removed, stored, and reinstalled; some dimensional changes would occur due to changes in wall thicknesses, and new spaces for mechanical, electrical, or structural systems. The proposed wall cross-section appears to indicate that the new wall thickness would exceed the existing dimension, resulting in changes to window profiles and reworking of salvaged materials prior to reinstallation. The Design-Build team proposes to maintain the existing wall profile to the extent feasible. Retrofitting the California State Building to meet the earthquake performance objectives established in the design-build program would alter or destroy historic finishes and spatial configurations. These effects would be adverse impacts on Very Significant or Significant interior spaces, including the Governor's Suite, Chief Justice's Suite, other Justice's Suites, the lobbies and corridors.

Construction activities related to the project could cause damage to other historic buildings in the Civic Center. The project could also result in disturbance of prehistoric or historic resources buried underneath or besides the California State Building.

Mitigation measures have been proposed that would require the California State Building renovation to meet the Secretary of Interior's Standards for rehabilitation of historic structures, maintain a record of historic resources in the area (including the Annex), and protect other historic structures. The measures include the photo-documentation of the historic resources to be affected; design of the work program as to avoid damage to existing historic resources, and monitoring of renovation and construction work to prevent damage and to avoid disturbance or loss of sub-surface archaeological features.

With implementation of those measures, other project effects on cultural resources would be less-than-significant.

TRAFFIC, TRANSIT PARKING AND CIRCULATION

The proposed project would generate about 5,360 net new person-trip ends (pte) per day. The project would generate about 340 new p.m. peak-hour vehicle trip-ends, both drive-alone and rideshare trips. It is expected that with the project-generated traffic, the p.m. peak hour level of service (LOS) at five of the nine intersections studied would remain the same, at LOS A or C. LOS at the other four intersections could either remain the same or decrease from B to C. These intersections include Golden Gate / Van Ness, McAllister / Van Ness, McAllister / Larkin, and Market / Hyde / Ninth. With cumulative plus project traffic, LOS at McAllister / Van Ness would decrease from C to D, and at McAllister / Polk, from A to B.

The project site is well-served by both local and regional transit carriers, including MUNI, BART, Sam Trans, and Golden Gate Transit directly, and AC Transit and Caltrain via connecting MUNI lines. The project would generate about approximately 400 net new p.m. peak-hour transit trips, with MUNI and BART receiving approximately 135 new riders each. The addition of p.m. peak-hour MUNI and BART riders is not expected to significantly alter peak-direction transit traffic levels for either one of the services.

The project would create additional demand for off-site parking. The project would include approximately 60 parking spaces, to be reserved for judges and other state officials. Currently, on-street parking in the project vicinity is approximately 85 percent occupied on an average weekday and off-street parking is about 66 percent occupied. Net new project parking demand would total 615 parking spaces, including 490 spaces in the long-term and 125 spaces in the short-term. Parking demand resulting from the project could be met within the existing supply of parking spaces. Cumulative parking demand in the year 2000 is projected to increase to about 4,390 spaces, resulting in an unmet demand under cumulative conditions of about 60 spaces, assuming projects contained in the cumulative background would not provide any on-site parking spaces.

The project would increase pedestrian traffic by approximately 360 person-trips during the midday peak, increasing pedestrian use of crosswalks adjacent to the project site. Crosswalks near the site are expected to continue to operate in open or unimpeded condition during both the midday peak 15-minute period and the 15-minute p.m. peak period, except for the south crosswalks at McAllister / Van Ness (midday period), the north and east crosswalks at McAllister / Polk (midday and p.m. periods), and the west crosswalk at McAllister / Larkin (p.m.

period). With the project and with project and cumulative, conditions at these three crosswalks are expected to worsen from open to unimpeded.

Impacts of construction-related traffic would include short-term and intermittent lessening of capacities of access streets and haul routes because of slower movements and larger turning radii of construction trucks compared to passenger vehicles. The project's peak construction period would occur during the overall peak construction period for other proposed development projects in the Civic Center area. Construction traffic related to total construction activity in the Civic Center area would be about twice as high (for construction trucks) and three times as high (for construction workers) as for the project itself, and traffic congestion and transit delays could be more extensive than for the project alone. Limiting the hours of construction truck movement, a standard practice in San Francisco, and adhering to the *Civic Center Construction Staging Area, Street and Sidewalk Use Plan,* in preparation, would avoid significant construction traffic effects.

The project would generate approximately 45 freight and service vehicle loading stops per day, with an average demand of about two spaces per hour and peak hour demand of three spaces. The project would meet the State's operational demand for two spaces per hour and peak hourly demand of two to three loading spaces.

Project transportation effect would not be significant. The project would include measures to reduce less-than-significant effects, including an on-site Transportation Coordinator to encourage use of alternative travel modes, and controls on construction traffic.

NOISE

The existing ambient noise environment in the vicinity of the project site is typical of downtown San Francisco, dominated by vehicular traffic including cars, trucks, buses and emergency vehicles. Background noise levels in the site vicinity have ranged from 65 decibels (dBA) on Larkin and Hyde Streets to 80 dBA on Van Ness Avenue. Existing surrounding land uses are primarily office, commercial, performing arts and residential uses. As such, the only sensitive receptors located in the project vicinity are residential uses to the east and northeast of the site, approximately 80 ft. from the site.

Construction activities associated with the project could increase noise levels for the residential uses located across Larkin Street to approximately 80 dBA. This noise would be generated by construction equipment and by the truck traffic associated with the project. Noise effects at

residential uses further from the site on Larkin Street to the north or McAllister Street to the east would not be expected to exceed the 80 dBA standard with windows open. Noise impacts could also be accentuated if the project were to take place concurrently with other construction projects planned in and around the Civic Center, but would not be expected to generate noises levels above 80 dBA in the vicinity of the site.

The project would include noise attenuation measures that would reduce construction noise related to the project, generally consistent with the San Francisco Noise Ordinance. These measures include the use of construction equipment with noise controls, establishing project working hours to prevent noise-generating activities during the nighttime, and locating noise sources as far away as possible from the residential uses.

With implementation of these measures, project noise effects would be less-than-significant.

AIR QUALITY

Construction activities would generate short-term emissions from equipment exhaust and dust generation. Project-related operational vehicular traffic would add to cumulative regional pollutant emissions, and contribute to the continued failure of the Bay Area to attain Federal ozone and carbon monoxide (CO) standards. Project-related traffic alone would not contribute substantially to transportation-related emissions resulting from development in San Francisco County, and thus would not pose a potentially significant effect on air quality. However, emissions of particulates generated during project construction, together with cumulative development, would increase particulate concentrations, and may increase the frequency of fine particulate matter standard (PM_{10}) violations in San Francisco, with concomitant health effects and reduced visibility. Project construction and operation by themselves would not generate particulate emissions exceeding the applicable standards.

Currently, neither the one- nor the eight-hour CO standards are being violated in the project vicinity at any intersections studied, and neither project-generated nor cumulative vehicle traffic would cause violations at any of the study intersections. Local CO concentrations are predicted to be less in 2000 than in 1994 (the base year for project impacts), because the effects of emissions controls on new vehicles would offset increases in traffic volumes and congestion.

The project would include measures that would reduce project-related air emissions. These measures include the implementation of a dust control plan during project construction to reduce

the amount of particulate matter generated, use of construction equipment that has been adequately tuned-up to reduce nitrogen oxide emissions, and the implementation of a program to reduce the number of single-occupancy vehicles, after project completion. Additionally, the relocation of state offices from dispersed locations not well-served by public transit, to a single location that is well-served by public transit, would be expected to reduce the State's air emissions over existing operations. Air emissions from backfilling of leased space would continue to occur. Project-related air emissions effects would be less than significant.

GEOLOGY AND SOILS

The project site, like San Francisco and the Bay Area in general, is subject to ground shaking from potentially large earthquakes on the San Andreas and Hayward faults, as well as on other faults in the region. Increases in employment and public use at the site that would occur as a result of the project would result in a larger number of people being exposed to seismic hazards, at the site compared to existing conditions, if an earthquake occurred during the day. The New State Office Building, which would replace the Annex, would be subject to more stringent building and structural standards than older buildings. The project would also include seismic upgrading of the California State Building. The California State Building, built in 1922, and damaged in the 1989 earthquake, would be renovated to meet the most current seismic standards.

In addition, the excavation associated with the project could create safety risks to workers, and adjacent structures. Dewatering could pose safety risks to adjacent structures and increase sediment load to the City's combined sewer system.

The project would include a final geotechnical report specifying measures to prevent settlement or other earth movement during excavation and dewatering activities, and controlling sediment transport in dewatering activities. With implementation of these measures, the project's geology impacts would not be significant.

PUBLIC HEALTH AND SAFETY

Before the buildings currently at the site were constructed, the block was occupied by numerous businesses that may have involved the use of hazardous substances, such as auto repair or paint shops. If previously used at the site, hazardous materials could potentially have contaminated soil and/or groundwater. Materials such as asbestos and lead-based paints have been used in the construction of the buildings at the site. In addition, there are three underground storage tanks at

the site. Two of these tanks are within concrete vaults. One of the tanks, which held diesel fuel, is now closed. Of the other two tanks, one holds diesel fuel and the other holds oil to fuel the boiler. No hazardous materials were identified during previous soil sampling near the tanks.

The project would include mitigation measures that would reduce potential impacts on public health and safety. These measures would include surveys to identify the location and quantity of hazardous building materials, abatement of any materials identified, investigations to identify whether contamination is present and to characterize implementation of a site remediation plan, if necessary, implementation of appropriate procedures to dispose of any hazardous materials that may be found, appropriately closing or bringing existing storage tanks into compliance with regulations to avoid future soil and/or water contamination, and monitoring for the presence of hazardous materials not previously identified during investigations The measures would result in removal or encapsulation of asbestos or lead-based paint materials at the site. With implementation of these mitigation measures, impacts on public health and safety associated with the project would be less-than-significant.

POPULATION AND HOUSING

At full occupancy, the project would house approximately 2,500 employees; about 925 of these jobs are at the project site now and about 1,575 employees would be relocated to the proposed project site from other leased offices in San Francisco. The project would not create a direct increase in employment, population or housing demand in San Francisco.

It is assumed that the leased office space vacated by relocated state employees would then be occupied over time by other businesses and employees. Approximately 1,575 jobs could be accommodated by the release of that space, indirectly increasing employment, population and housing demand in San Francisco. State employment in San Francisco would not increase as a result of the project. The project would create a net increase in office space. The released space could be occupied by existing San Francisco businesses moving or expanding in the City, or by businesses new to San Francisco. In the context of overall growth expected in San Francisco, the effects would not be considered significant.

C. ALTERNATIVES

ALTERNATIVE 1: NO-PROJECT

This alternative would entail no change to the site. No demolition of the Annex would occur, and the California State Building would not be renovated. The Supreme Court and Appellate Courts, and other state agencies, would remain in leased space in San Francisco. This alternative would not preclude future redevelopment of all or part of the site including renovation of the State Building. For the foreseeable future, state agencies would continue to lease space elsewhere in San Francisco.

If this alternative were implemented, none of the impacts associated with the proposed project would occur. The environmental characteristics of this alternative would be generally as described in the Setting sections of this report (see Chapter III, Environmental Setting, Impacts and Mitigation, for a discussion of existing conditions). Operational inefficiency in state agencies and services would continue from use of separate, rather than consolidated, facilities. The No-Project alternative would not meet legislative goals of developing such consolidated facilities to maintain a strong state presence in the Civic Center; achieve more efficient public service at a single site; maximize use of the State's existing assets and renovate the historic California State Building and build a New State Office Building capable of supporting a long life-span and quick re-occupancy after an earthquake.

This alternative would not respond to City of San Francisco policies to enhance governmental activities in the Civic Center, and maintain architectural resources. The reduced level of state employment in the Civic Center since the 1989 earthquake would continue. Existing buildings would not be replaced or upgraded with seismically safer structures. In particular, the historic California State Building, damaged in the 1989 earthquake, could be subject to further damage in a future earthquake. There would be no direct effects on visual quality or architectural resources, including historic districts, as no demolition or construction would occur. This alternative would not renovate the California State Building, a contributory building in the National Register Historic Landmark District and Historic District, and the proposed local Civic Center Historic District. The California State Building would continue in its vacant condition, with deteriorated exterior detail, and with no renovation and re-use of important interior spaces, such as the Supreme Court Room or the Governor's Suite, the original users of the building. Traffic and parking would not be affected; future traffic conditions in the Civic Center area would reflect the impacts of cumulative development, minus the project.

With the No-Project alternative, transportation would not be affected by construction traffic. No new shadow would be cast by the project; pedestrian-level wind condition would not be affected. Existing potential hazards such as asbestos in buildings on the site would remain or be remediated separately from the project. Project excavation would not occur. There would be no demolition- or construction-related worker exposure to, or disposal of, hazardous materials, or potential exposure for other persons, nor would there be any remediation of contaminated soil (or groundwater if applicable). Other impacts discussed, including air quality effects, potential effects on subsurface cultural resources, or effects related to soils and geology and hydrology, including dewatering, would not occur.

ALTERNATIVE 2: RENOVATE AND REUSE 525 GOLDEN GATE AVENUE WITH SMALLER NEW STATE OFFICE BUILDING

The Department of General Services controls property at 525 Golden Gate Avenue, a state office building that has been vacant since the Loma Prieta earthquake, adjacent to the project site on the west. The Department eventually plans to dispose of the building. Renovation and re-use of 525 Golden Gate was considered and rejected during planning for the project because use of the three existing buildings (the California State Building, the reuse of Annex and 525 Golden Gate) would supply 820,000 gross sq. ft. This would not meet the ten-year space demand of approximately 1,050,000 gross sq. ft. The building cannot be completely demolished for new construction because it houses the state Division of Telecommunications' Calnet telephone central office switch for the Bay Area. Alternative 2, therefore, is assumed to be a project which would include renovation of the California State Building, renovation and re-use of 525 Golden Gate Avenue, and a smaller New State Office Building (at the Annex site), totaling 1,053,000 gross sq. ft. This would meet the project objectives for space needs.

The alternative would meet other state objectives to maintain a strong state presence in the Civic Center; and consolidate state agencies to a single site to achieve more efficient public service. It would use, but not maximize the Department of General Services' development of its existing assets. It would renovate the historic California State Building and build a New State Office Building capable of supporting a long life-span and quick re-occupancy after an earthquake.

Alternative 2 would include renovation of the California State Building, and demolition of the Annex and construction of a New State Office Building, as with the project. Renovation of 525 Golden Gate would provide the equivalent of about 150,000 gross sq. ft., and about 120,000 usable sq. ft. Therefore, Alternative 2 would include a New State Office Building of about

695,000 gross sq. ft., compared to 845,000 gross sq. ft. with the proposed project. The New State Office Building with this alternative would be 13 stories and 180 ft. tall compared to 16 stories and 209 ft. tall with the project. This alternative would thus reduce the height of the proposed New State Office Building by three stories.

The 525 Golden Gate Avenue building is seven-stories plus basement, immediately west across Polk Street from the project site. The alternative assumes renovation of 525 Golden Gate would meet current structural and life-safety standards, and would provide general offices. Special facilities proposed with the project, such as the auditorium, training center and cafeteria, would be part of the New State Office Building, as with the project, and the California State Building would be renovated for Supreme Court and Appellate Court uses, as with the project.

The major difference between effects of the proposed project and this alternative would be related to use of two sites, and development of a smaller New State Office Building. Effects on land use, with this alternative, in the Civic Center would be similar to those of the project; the alternative would continue public use on the California State Building and Annex site, and on the 525 Golden Gate site. The proposed design for this alternative is assumed to be similar to the project, a series of elements rising in height from the California State Building to Golden Gate Avenue. The 13-story New State Office Building with this alternative would be visible from many locations around the Civic Center, but would be less prominent than the 16-story proposed project. As with the project, the New State Office Building would be seen above and to the north of the California State Building. Because of the reduced height of the New State Office Building with this alternative, a greater portion of the existing Phillip Burton Federal Building north of Golden Gate Avenue would remain visible in views in the Civic Center from the south, southwest, or southeast. Along Golden Gate Avenue, the alternative would rise to 13 stories, compared to the 20-story Federal Building across the street. The alternative New State Office Building would appear substantially larger than the existing seven-story Annex on the project site, as would the project. Shadow effects of this alternative would be reduced, compared to those of the project. Maximum shadow length with the 180-ft. alternative would be about 80 percent of project shadows. For example, in noon periods in March and September, the alternative would newly shade about 60 percent of the Federal Building plaza, compared to about 75 percent with the proposed project. Overall, the plaza would be about 75 percent in shade at noon. In summer months around noon, the Federal Building plaza would be in sun, and in winter months, largely in shade, as with the project. Wind effects of Alternative 2 would be similar to those of the project. The alternative would reduce the occurrence of exceedances of the

hazardous wind criterion from six locations in the project vicinity with existing conditions to three locations with this alternative.

Effects on the architectural character from renovation of the California State Building would be similar to those with the project, including exterior renovation, seismic structural work, and significant alterations of interior spaces.

Transportation effects would also be similar to those with the project; cumulative effects would be slightly reduced, as re-use of 525 Golden Gate Avenue would not take place in addition to activity generated by the full project. Effects on intersections, transit and crosswalks in the vicinity would not be perceptibly different with use of the adjacent site. Air quality, geology and soils, and public health and safety issues would also have similar effects and mitigation measures with this alternative; no excavation would be required at 525 Golden Gate. Renovation at 525 Golden Gate could have construction noise effects at the 512 Van Ness Avenue apartments, about 100 ft. to its west. Those noise effects would be mitigated similarly to those of the project.

ALTERNATIVE 3: RENOVATE AND REUSE 525 GOLDEN GATE AVENUE, NEW CONSTRUCTION AT HASTINGS SITE, AND SMALLER NEW STATE OFFICE BUILDING

Hastings College of Law (Hastings), a unit of the University of California, owns an approximately 38,000-sq.-ft. site at the southeast corner of Larkin Street and Golden Gate Avenue. The property includes a surface parking lot, and the site of two retail buildings and two residential hotel buildings that contained a total of 85 units with ground-floor retail space. The four buildings were demolished following the Loma Prieta earthquake. At the present time, Hastings is not pursuing any development planning or proposals for the site, nor is the site on the market for disposal. (The San Francisco Unified School District is considering acquisition of the Hasting site for a new elementary school.) Alternative 3, therefore, is assumed to be a project which would include renovation of the California State Building, re-use of 525 Golden Gate Avenue, new construction at the Hastings site, and a smaller New State Office Building (at the Annex site), totaling about 1,050,000 gross sq. ft. This would meet the project objectives for space needs, and would also meet project objectives to maintain state offices in the Civic Center; consolidate state agencies to achieve the economic benefits of more efficient public services. It would use but not maximize the State's existing real estate assets, renovate the historic California State Building and build a New State Office Building capable of supporting a long life-span and quick re-occupancy after an earthquake.

Alternative 3 would include renovation of the California State Building, demolition of the Annex and construction of a New State Office Building, as with the project. Renovation of 525 Golden Gate would provide about 150,000 gross sq. ft., and about 120,000 usable sq. ft. New construction at the Hastings site would provide about 200,000 gross sq. ft. Therefore, Alternative 3 would include a New State Office Building of about 495,000 gross sq. ft., compared to 845,000 gross sq. ft. with the proposed project. The new building at the Annex site with this alternative would be about 9 stories and 130 ft. tall, compared to 16 stories and 209 ft. tall with the project. This alternative would thus reduce the height of the proposed New State Office Building by about seven stories.

The seven-story 525 Golden Gate Avenue building would be renovated to current standards, as with Alternative 2. Special facilities proposed with the project, such as the auditorium, training center and cafeteria, would be part of the New State Office Building, as with the project. The California State Building would be renovated for Supreme Court and Appellate Court uses, as with the project.

The new 200,000-gross-sq.-ft. building on the Hastings site would be six stories and 80 ft. tall, generally built to the property line on street frontages. The building could be set back from the rear property line to allow light to reach the rear of existing apartment buildings on the McAllister Street frontage of the block.

The major difference between effects of the proposed project and this alternative would be related to use of three sites, and development of a smaller New State Office Building. Effects on land use, with this alternative, in the Civic Center would be similar to those of the project; the alternative would continue public use on the California State Building and Annex site, and on the 525 Golden Gate site. It would convert the Hastings site to public uses. The nine-story New State Office Building with this alternative would be visible from many locations around the Civic Center, but would be less prominent than the 16-story proposed project. The nine-story New State Office Building with this alternative would be about 40 ft. higher than the six-story California State Building. The new building would be visible above and to the north of the California State Building; from the south in the Civic Center, depending upon location of the viewer, up to 10 stories of the Federal Building would be visible to the north of the new building. The alternative would also be visible in views from Golden Gate Avenue, and would be about half the height of the 20-story Federal Building across the street.

The new building at the Hastings site with this alternative would replace views of the existing parking uses and vacant lots, as seen from Larkin Street and Golden Gate Avenue, and from the easterly area of Civic Center Plaza. At 80 ft., this building would be similar in height to many older buildings in the Civic Center; it would be taller than the existing one- to six-story retail-residential buildings nearby on Larkin Street, McAllister Street and Golden Gate Avenue. It would be similar in height to the Hastings College of the Law classroom building which occupies the easterly third of the block. The new building would limit views of the Larkin Street frontage of the New State Office Building, as seen from the east on Golden Gate Avenue.

Shadow effects of this alternative would be reduced, compared to those with the project. Maximum shadow length with the 130-ft. alternative New State Office Building would be about 60 percent of project shadows. For example, in noon periods in March and September, the alternative would newly shade about 15 percent of the Federal Building plaza. With existing shade, about 30 percent of the plaza would be in shade at that time, compared to about 90 percent with the project and existing shade. In summer months around noon, the Federal Building plaza would be in sun, and in winter months, largely in shade, as with the project. Wind effects with this alternative would be expected to be similar to those with the project or existing conditions. Exceedances of the hazardous wind criterion would range from three locations (with the project) to six locations (with existing conditions).

Effects on the architectural character from renovation of the California State Building would be similar to those with the project, including exterior renovation, seismic structural work, and significant alterations of interior spaces.

Transportation effects would also be similar to those with the project; cumulative effects would be slightly reduced, as re-use of 525 Golden Gate Avenue and the Hastings site would not take place in addition to activity generated by the full project. Effects on intersections, transit and crosswalks in the vicinity would not be perceptibly different with use of the adjacent site. This alternative, including excavation and development at the Hastings site, would have effects similar to the project, air quality, geology and soils, and public health and safety issues. No excavation would be required at 525 Golden Gate. Renovation at 525 Golden Gate could have construction noise effects at the 512 Van Ness Avenue apartments, about 100 ft. to the west. Construction at the Hastings site would have noise effects on adjacent residential uses on the north side of Golden Gate Avenue, the east side of Larkin Street, and the north side of McAllister Street. Those noise effects would be mitigated similarly to those of the project.

ALTERNATIVE 4: BASE-ISOLATION STRUCTURAL SYSTEM FOR THE CALIFORNIA STATE BUILDING

The proposed project would use a fixed-base, shear-wall system to retrofit the California State Building to meet seismic response requirements that are one of the project objectives. As described in Cultural Resources, the proposed shear-wall structural system was found to be an adverse effect on the historic interior architectural features of the California State Building. This Alternative 4 would be a project that would use a base-isolation structural system for California State Building, to meet the State's objective for seismic response for the renovated building. The base-isolation system would have different effects on the interior architectural features of California State Building, as described below. Alternative 4, therefore, is assumed to be a project which would include renovation of the California State Building, and development of a New State Office Building (at the former site), totaling about 1,050,000 gross sq. ft., as with the project. This would meet all the project objectives including renovating the historic California State Building and build a New State Office Building with a structural system capable of supporting a long life-span and quick re-occupancy after a major earthquake.

Alternative 4 would include renovation of the California State Building, demolition of the Annex and construction of a New State Office Building, as with the project. The base-isolation system would include the following major features:

- Foundation work would include extensive underpinning of perimeter foundations, removal of some existing footings, jacking of all columns and perimeter walls, and the construction of two new basement floors, one above and one below the isolators. New basement shear-wall would be required to minimize uplift on the isolators.

- A 24-inch moat would be constructed along the south, west and east perimeters. A 30-inch seismic separation would be constructed along the north wall of the New State Office Building.

- The required seismic gap between the two buildings would result in a loss of available gross area per floor; the loss would be greater for the isolated approach. The net difference would be approximately 500 gross sq. ft. per floor.

- At each connecting corridor between the California State Building and the New State Office Building, special enclosures would be required to bridge the seismic gap with weather-tight, fire-safe materials. Allowing for possible seismic movement between building, a vestibule about 8 ft. deep by 24 ft. wide would be required at each point of connection. This would result in an additional 180 net square feet per connection per floor to be replanned.

All other aspects of the proposed design and program would be the same with this alternative or with the project. The flexible connection at hallways between the California State Building and the New State Office Building would require re-planning about 4,000 sq. ft. of floor area for the project. This would be expected to be accommodated in the 1,050,000 gross sq. ft. project. The major difference between the effects of the proposed project and this alternative would be related to architectural resources. Effects on land use, overall visual quality, transportation, noise, air quality, geology and soils, public health and safety and employment and population would be the same as those of the project.

In the base-isolation scheme, new shear-walls would not be added on the interior of the McAllister, Larkin and Polk facades of the California State Building, as would be proposed with the project. This alternative would thus not require a four-foot corridor adjacent to those facades, for access during construction of the shear-wall. This alternative would not remove existing original plaster surfaces, plaster molding, wood trim, paneling and cabinet work along that perimeter and intersecting partition walls. As with the project, the base-isolation system would require shear-walls on the north walls of the three wings, the east and west walls of the central wing, and lateral shear-walls near the east and west ends of the building. The base-isolation alternative would have greater impacts on existing elements in the California State Building basement than would the proposed project, due to the need to excavate for underpinning and installation of isolators, and basement shear-walls.

Alternative 4 would reduce adverse effects on interior spaces on the McAllister Street frontage of the California State Building, the Governor's Suite, the Chief Justice's Suite, and the other Justices' Suites.

The 24-inch-wide moat would be a new visual element on the exterior of the building. The moat would require removal of some existing landscaping. The moat, surfaced with flexible covers, would be visible at ground levels as part of the California State Building setbacks from sidewalks on McAllister, Larkin and Polk Streets. Exterior renovation and visual quality of the California State Building as seen from the south, east and west from nearby streets and Civic Center Plaza would be the same with this alternative as with the proposed project.

The Design-Build team, HSH, considered a number of structural concepts for the renovated California State Building and the New State Office Building. Among eight structural approaches briefly presented in the Design-Proposal, the fixed-based system and the base-isolation systems for the California State Building were further analyzed. That comparison is generally consistent

with the discussion of the proposed project and Alternative 4 herein. The Design Proposal review concluded that the fixed-base system was more appropriate, and rejected base-isolation, for the following major reasons:

- While the shear-wall approach would have a greater effect on interior features of the California State Building than would base-isolation approach, the HSH team believes that the proposed shear-wall structural renovation would result in a project, after design development, that would meet the Secretary of the Interior's Standards for rehabilitation of historic buildings.

- The space planning required for corridor connections between the two buildings with base-isolation would substantially affect design of interior public spaces, including proposed exposure of the north facade of the California State Building. On upper floors, each connecting corridor would require a vestibule room, roughly 8 ft. deep (north-south) and 24 ft. long, to accommodate all possible motions of the corridor platform cantilevering from the California State Building.

- The moat required for base-isolation would adversely affect the exterior character of the California State Building.

- Base isolation would cost an estimated $6,000,000 more than the proposed shear-wall system.

ALTERNATIVES CONSIDERED AND REJECTED

Alternatives that would provide the 1,050,000 gross sq. ft. of space in downtown San Francisco that were considered, and rejected as described in the Notice of Preparation, Appendix A, and in Section IV herein, included the Transbay Terminal, 150 Oak Street Site, and the Central Freeway Property.

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
A. Land Use Compatibility and Policy Conformity		
A.1: The project would retain and expand existing public uses in the Civic Center; it would not change existing uses on the site or nearby areas. (Not Significant)	No mitigation measures are required.	
A.2: The project would be consistent with state goals and policies for office facilities in San Francisco. (Not Significant)	No mitigation measures are required.	
A.3: The project would generally respond to major *San Francisco Master Plan* policies applicable to the project. (Not Significant)	No mitigation measures are required.	
A.4: The project would be consistent with San Francisco City Planning Code Public (P) Use District Designation. (Not Significant)	No mitigation measures are required.	
A.5: The project, at 209 ft. in height would not be consistent with San Francisco City Planning Code Height and Bulk limits for the site of 80 ft. (see impacts for Visual and Design Factors, Solar Access, and Wind). (Not Significant)	No mitigation measures are required.	
B. Visual and Design Factors		
B.1: The proposed project would change views of the site, replacing the seven-story, 80 ft. Annex, with the New State Office Building, ranging up to 16 stories and 209 ft. in height. The project would retain and renovate the California State Building. (Not Significant)	No mitigation measures are required.	
B.2: The project would not cause glare effects that would be hazardous to motorists. (Not Significant)	No mitigation measures are required.	

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
C. Solar Access and Shading		
C.1: The project would add shade to streets, sidewalks, and the Federal Building plaza. Shadow effects on the plaza would limit public use. (Not Significant).	No mitigation measures are required.	
D. Wind		
D.1: The wind environment with the project would be about the same, or improved overall, compared to existing conditions, with the project. With the project, and project plus other potential development in the vicinity, there would be fewer exceedences of the City's 11 mph pedestrian comfort criterion than with existing conditions. Under existing conditions, there are six locations at which the 26 mph hazard criterion is exceeded, five on the Federal Building block, and one in Golden Gate Avenue on the project block. With the project, and with the project plus potential development, three locations on the Federal Building block of the six existing exceedence points, would continue to exceed the hazard criterion. The time over which hazard exceedences would occur would be reduced by about 50%. Project wind effects would eliminate existing hazard exceedence at three locations. The project would not cause an exceedence of the hazard criterion, and wind effects would not be significant. (Not Significant)		

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
E. Cultural Resources		
E.1: Based on information in the Design Proposal, integrating structural upgrades, as currently proposed with the project, into the California State Building could have a substantial impact on the historic resource. The proposed project would adversely affect the Governor's Suite, Chief Justice's Suite, and other Very Significant or Significant spaces identified in the California State Building. (Potentially Significant)	**E.1:** The project would accommodate seismic improvements in a manner that would limit disturbance to the historic character of the California State Building. **E.1.a:** The Secretary of the Interior's Standards and Guidelines for Rehabilitating Historic Buildings and the Recommendations in the Building Evaluation Report (BER) would be used to guide in the repair, rehabilitation, restoration, and reuse of the California State Building. **E.1.b:** The project could use the Minimal Acceptable Earthquake Performance Objectives in the Seismic Safety Commission's Policy on Acceptable Levels of Earthquake Risk in State Buildings. **E.1.c:** The California State Building would be photo-documented prior to construction, using Historic American Building Survey (HABS) standards for photography. **E.1.d:** A full Historic Structures Report (HSR) would be prepared prior to completion of the design development phase. **E.1.e:** The Design-Build team would prepare documentation of Very Significant and Significant spaces to note 1) the original and existing configuration of these spaces, and 2) the proposed modifications.	Less-than-Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
E.2: The project would renovate or restore historic features of the California State Building, including exterior elements such as the slate roof in the original design, and the previously-altered Supreme Court Room. This would be considered a beneficial effect of the proposed project. (Not Significant)	No mitigation measures are required.	Less-than-Significant
E.3: Integrating life safety, access, and environmental upgrades into the California State Building, as currently proposed by the project, would have a substantial impact on the historic resources. (Potentially Significant)	**E.3**: The project would incorporate measures to limit adverse effects on building space and components due to life-safety, access, or environmental retrofits, including adopted measures in Mitigation E.1. The project could also continue the configuration of the Main and Service Corridor, a 90-degree plan arrangement. The Design Proposal shows the walls at the intersection of the two corridors would be demolished, and reconstructed in an enlarged form, with a non-historic off-set plan configuration, which did not exist historically and does not reference the existing architecture of the building. **E.3.a:** The project would use the provisions for historic buildings in the Americans with Disabilities Act (ADA). These codes would also be used by the SHPO in their project review. **E.3.b:** Significant building components (see Table 3) that must be disturbed for the incorporation of code-driven, such as ADA requirements, retrofits would be salvaged and reused.	Less-than-Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	E.3.c: The Design-Build team would prepare, during design development, a survey of interior finishes to determine what significant components affected by ADA requirement would remain in place, what would be destroyed, and what would be removed, stored, and reinstalled. These conditions would be indicated on drawings and submitted to the SHPO for review and approval. The SHPO would determine the specific requirements for the submittal of this information.	
E.4: Construction activities at the California State Building could adversely affect this building. (Potentially Significant)	**E.4:** A structural engineer would determine threshold levels of vibration and cracking prior to construction, and if these are met or exceeded, then construction techniques would be re-evaluated.	Less-than-Significant
E.5: Construction of the proposed project has the potential to damage historic buildings adjacent to the proposed project. (Potentially Significant)	**E.5:** The project would incorporate measures to avoid damage to nearby historic resources. **E.5.a:** A structural engineer would determine threshold levels of vibration and cracking prior to construction, and if these are met or exceeded, then construction techniques should be re-evaluated. **E.5.b:** Features, fixtures, and finishes associated with the surrounding historic buildings that might be damaged during construction would be identified by a historic preservation architect and photographed; a written description of their existing condition also would be prepared. **E.5.c:** Construction staging areas would be placed away from surrounding historic structures.	Less-than-Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
E.6: The demolition of the Annex would result in a loss of one of a grouping of three public buildings from the late 1950s. While none of these buildings is currently recognized as historically or architecturally significant, they may have the potential of comprising a future historic district. (Not Significant)	No mitigation measures are required.	
E.7: The New State Office Building would be of different scale and architectural character than the 80-ft.-tall California State Building, and other older Buildings in the Civic Center historic Districts. (Not Significant)	No mitigation measures are required.	
E.8: The cumulative impact of the project plus other construction projects would not have an adverse impact on the Civic Center Historic Districts. (Not Significant)	No mitigation measures are required.	
E.9: Demolition of the Annex, excavation for two proposed exterior stairways at the east and west ends of the California State Building, and possible foundation work at the California State Building could have a substantial impact on prehistoric and historic archaeological remains. (Potentially Significant)	**E.9:** The project sponsor would retain the services of a professional archaeologist or historic archaeologist, to monitor excavation activities at the site that may expose archaeological materials.	Less-than-Significant
F. Traffic, Transit, Parking and Circulation		
F.1: The proposed project would increase traffic on the roadway network (at intersections and on freeways) in the project area. (Not Significant)	No mitigation measures are required.	
F.2: The proposed project would increase ridership on local and regional transit facilities serving the project area. (Not Significant)	No mitigation measures are required.	
F.3: The proposed project would generate demand for long-term and short-term parking in the project area. (Not Significant)	No mitigation measures are required.	

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
F.4: The proposed project would increase pedestrian volumes on project area crosswalks. (Not Significant)	No mitigation measures are required.	
F.5: The proposed project would generate demand for freight and service vehicle loading at the project site. (Not Significant)	No mitigation measures are required.	Less-than-Significant
F.6: Construction of the proposed project would generate short-term traffic increases and parking demand, and would add to the cumulative effect of overlapping activity associated with construction of other buildings in the Civic Center area. (Not Significant)	**F.6:** The project would adhere to the recommended actions and practices established by the Civic Center Coordinating Committee, as part of the *Construction Staging Areas, Street and Sidewalk Use Plan* currently being prepared.	Less-than-Significant
F.7: The proposed project would contribute to cumulative transportation effects on regional freeways, local roadways serving as access for freeway and transit. (Potentially Significant)	**F.7:** Tenant agencies would implement transportation management to encourage State employees to use alternative ("non-drive alone") modes of transportation to and from work, and a program of incentives (for example, on-site sale of transit passes, and dissemination of information about transit services available in the project area).	Significant
G. Noise		
G.1: Demolition and construction activities would result in temporary noise increases in the site vicinity. (Potentially Significant)	**G.1:** The project would include construction measures for equipment noise, truck scheduling, and noise barriers to minimize potentially significant construction noise impacts.	Less-than-Significant
G.2: Construction equipment vibration could damage nearby buildings. As pile-driving is not proposed with the project, levels of vibration from other activities would not be expected to cause damage. (Not Significant)	No mitigation measures are required.	
G.3: Project construction would result in a temporary increase in truck traffic. (Not Significant)	**G.3:** Truck noise would be restricted under Mitigation G.1.a and G.1.b.	Less-than-Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
G.4: Cumulative construction noise increases could occur in the project vicinity, if construction of other planned/approved projects occurs simultaneously. (Not Significant)	No mitigation measures are required.	
H. Air Quality		
H.1: Construction activities associated with the project would generate dust, which includes the respirable fraction known as PM_{10} (particles 10 microns or less in diameter). This would be a short-term adverse impact. (Not Significant)	**H.1:** To assure that construction-related dust emissions are maintained at a less-than-significant level and to reduce overall levels of dust emissions, the project would include a dust control program.	Less-than-Significant
H.2: During construction activities, equipment exhaust would be generated, contributing to air quality emissions. (Not Significant)	**H.2:** All on-site construction equipment would receive a low-NO_x tune-up prior to use at the site and would be re-tuned after 90 days on the job site. Trucks or other equipment shall not be left to idle continuously for more than 10 minutes while waiting to load or unload.	Less-than-Significant
H.3: Traffic generated by the proposed project would incrementally increase regional vehicular emissions, but would not result in emissions exceeding the BAAQMD significance thresholds. (Not Significant)	**H.3:** The project would include standard state transportation coordination program to reduce single-occupancy vehicles and concomitant air quality emissions (see Traffic, Transit, Parking and Circulation).	
H.4: Traffic generated by the project would result in incremental increases in localized carbon monoxide concentrations but would not contribute substantially to existing or projected violations of air quality standards. (Not Significant)	**H.4:** See mitigation H.3.	
H.5: Particulate emissions resulting from construction and from vehicle trips generated by the project and cumulative development would increase particulate concentrations, which could increase the frequency of particulate standard violations in San Francisco. (Significant)	**H.5:** Mitigation H.1 would reduce project contribution to particulate emissions. Cumulative development effects on particulate emissions would continue to be significant.	Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
I. Geology		
I.1: Excavation associated with the project could create safety risks to workers and to adjacent structures. However, the project would comply with all applicable health and safety regulations regarding excavation and shoring. (Not Significant)	No mitigation measures are required.	
I.2: Excavation for the project might cause settlement of adjacent streets and structures. (Potentially Significant)	**I.2:** A final geotechnical report would be prepared that would specify appropriate methods for shoring and mitigation of settlement outside of excavation. Project contractor(s) would follow the geotechnical engineer's recommendations for shoring of the excavation to reduce the potential for collapse of the excavation sidewalls. Structures adjacent to the excavation, including the California State Building, should be underpinned to reduce the potential for settlement. The structures would also be monitored during construction for settlement and additional mitigation measures would be implemented if settlement were identified. The contractor would be required to comply with all recommendations in the final geotechnical report.	Less-than-Significant
I.3: Because of shallow groundwater at the site, it is likely that dewatering would be required for subgrade excavation. Dewatering of the site could cause settlement in the vicinity of the proposed project, resulting in damage to adjacent structures or streets. (Potentially Significant)	**I.3:** A final geotechnical report would be prepared including appropriate methods for dewatering during construction, methods for monitoring groundwater levels outside of the excavation, methods for monitoring settlement outside of the excavation, and mitigation measures to be followed in the event that the potential for settlement is identified. The contractor would be required to comply with all recommendations in the final geotechnical report.	Less-than-Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
I.4: The seismic upgrade of the California State Building and the construction of the New State Office Building would reduce the risk of seismic hazards to people and structures in the event of an earthquake. (Not Significant)	No mitigation measures are required.	
J. Public Health and Safety		
J.1: During renovation and demolition activities, construction workers and the public could be exposed to airborne hazardous building materials. (Potentially Significant)	**J.1:** The project would include additional surveys to identify more precisely the types and quantities of hazardous building materials present in the California State Building and the Annex. If necessary to protect public health, construction workers or the environment, removal and abatement of identified hazardous building materials would be conducted prior to demolition or renovation. Removal or abatement would be conducted in accordance with applicable regulations by a qualified contractor(s) using appropriate abatement procedures.	Less-than-Significant
J.2: Based on previous land uses at the site, hazardous materials may be present in the soil and/or groundwater. This has not been evaluated through previous sampling, but must be investigated appropriately prior to project start-up. The presence of hazardous materials could present potential health and safety risks to construction workers and the public. (Potentially Significant)	**J.2:** The project would include a soil and groundwater quality investigation at the proposed site.	Less-than-Significant
J.3: The presence of hazardous materials would impose restrictions on the handling and disposal of any soil excavated during construction and renovation. During excavation of this soil, the public could become exposed to chemical-laden dust or could directly contact the hazardous materials if allowed access to the area. (Potentially Significant)	**J.3:** Any soil containing hazardous materials produced during excavation would be disposed of in accordance with applicable laws and regulations.	Less-than-Significant

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
J.4: Hazardous materials remaining on site following site remediation and project construction might impose restrictions on the design of the proposed buildings for the proposed project. (Potentially Significant)	**J.4:** The project design would take into consideration the presence of any hazardous materials that might be left at the site following construction.	Less-than-Significant
J.5: The underground storage tanks at the proposed project site are not in compliance with current regulations. The regulations require periodic monitoring of the underground storage tanks which would provide early detection of a leak from the tanks. An undetected leak may cause more environmental impairment. (Potentially Significant)	**J.5:** Existing underground storage tanks would be brought into compliance with current underground storage tank regulations.	Less-than-Significant
J.6: During construction of the proposed project, previously unidentified hazardous substances could be encountered at the project site. (Potentially Significant)	**J.6:** The project contractor(s) would monitor for visual indications of contamination during excavation and construction.	Less-than-Significant
J.7: If groundwater at the site were contaminated, it would be necessary to obtain a permit for discharge of the groundwater during any dewatering associated with excavation or construction. (Potentially Significant)	**J.7:** The project would include analysis of groundwater prior to dewatering; groundwater from dewatering would be discharged in accordance with applicable regulations.	Less-than-Significant
J.8: Dewatering of the site during construction could increase the sediment load to the City sewer system. (Not Significant)	**J.8:** The project contractor(s) would install a holding tank prior to discharge to the sewer to allow solids to settle out of the water produced during dewatering.	
J.9: Street closures or reduction in street capacity during construction could impede local emergency response actions in the event of a fire or other type of emergency. (Not Significant)	No mitigation measures are required.	

TABLE I-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES (Continued)

ENVIRONMENTAL IMPACT	MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION
K. Population and Housing		
K.1: The project would maintain state employment at current levels and would not directly increase employment in San Francisco. (Not Significant)	No mitigation measures are required.	
K.2. The project would not directly increase the number of San Francisco residents. (Not Significant)	No mitigation measures are required.	
K.3: The project would maintain state employment at current levels and would not directly increase housing demand in San Francisco. (Not Significant)	No mitigation measures are required.	
K.4: The project could, indirectly, increase employment in San Francisco by approximately 1,575 employees. (Not Significant)	No mitigation measures are required.	
K.5: The project could, indirectly, increase the number of San Francisco residents. (Not Significant)	No mitigation measures are required.	
K.6: The project could, indirectly, increase San Francisco's population and demand for housing. (Not Significant)	No mitigation measures are required.	

II. PROJECT DESCRIPTION

A. PROJECT HISTORY

Three major state-owned office buildings in the San Francisco Bay Area were vacated following the 1989 Loma Prieta earthquake: the California State Building at 350 McAllister Street and the 525 Golden Gate Avenue building, both in San Francisco, and the 1111 Jackson Street building in Oakland. The state agencies occupying those buildings were relocated to various leased spaces in existing buildings. In 1990, California voters passed the Earthquake Safety and Public Buildings Rehabilitation Bond Act, which provided general obligation bonds for the seismic retrofit of buildings owned by state and local governments. In August 1990, Chapter 1339 added an appropriation to the Budget Act of 1990 authorizing funds to undertake a study of state facilities in the Bay Area and to begin work on two of the three buildings damaged during the Loma Prieta earthquake.

To address the state's existing and future facilities needs in the Bay Area, the *San Francisco / Oakland State Facilities Plan* (the Plan) was prepared by the State Department of General Services (DGS) and published in May 1992.[1] This Plan provides a guide for management and development of both state-owned and leased office facilities in the San Francisco Bay Area. The Plan recommends the major principles embodied in the Project Objectives, discussed below, related to consolidation of agencies in the San Francisco Civic Center, providing economic benefits to the community and making effective use of the State's real estate assets. The Plan also recommends consideration of the historic values and traditional uses in the renovation of the California State Building at 350 McAllister Street, and redevelopment of the 350 McAllister Street / 455 Golden Gate Avenue block.

Legislation enacted in September 1993, AB 896, statutes of 1993, Chapter 429 codified objectives of the Plan, including the intent to maintain a strong presence of state offices in San Francisco by locating statewide-serving agencies in the San Francisco Civic Center.[2] On the basis of the Plan and AB 896, DGS proposes to consolidate statewide-serving agencies in the San Francisco Civic Center and relocate regional-serving agencies to Oakland.

Statewide-serving agencies expected to remain in San Francisco as part of the project include the Supreme Court and Appellate Courts and Judicial Administrative Offices; the Department of

Industrial Relations; and the Department of Insurance. The Public Utilities Commission, a statewide-serving agency, would remain in the 505 Van Ness Avenue building (the Edmund G. Brown Building, built in the 1980's). Major local-serving state offices, such as the Franchise Tax Board, would also occupy the project.

The consolidation of statewide- and local-serving functions as recommended in the Plan would result in net new space at the 350 McAllister Street - 455 Golden Gate Avenue site. (This report refers to the 350 McAllister Street building as the California State Building, or State Building, and to the 455 Golden Gate Avenue building as the Annex.) With existing space at the California State Building to be renovated, and existing space at the Annex to be demolished and replaced, the project would have a total of about 1,053,000 gross sq. ft., of which about 460,000 gross sq. ft. would be net new space (see Project Characteristics, below). The Annex at 455 Golden Gate remained occupied after the 1989 earthquake.

Use of the other major state office building in San Francisco vacated after the 1989 earthquake, 525 Golden Gate Avenue, is not part of the proposed project. No proposal for disposition or re-use of that approximately 183,000-gross-sq.-ft. building has been developed at this time, and this EIR does not address environmental effects of such disposition.

As a separate project implementing parts of the Plan, the DGS is proposing a new State Office Building in the City Center area of downtown Oakland, to house primarily regional-serving agencies. That project is also proceeding with environmental review.

B. PROJECT OBJECTIVES

The DGS proposes to develop office space in San Francisco through the renovation and reuse of the historic California State Building at 350 McAllister Street, and the demolition of the Annex at 455 Golden Gate Avenue and construction of a new building. The project goal is to provide consolidated state office space in San Francisco that would satisfy the needs of statewide-serving agencies in the Bay Area to approximately year 2002. In pursuing the goals codified in AB 896, the DGS is planning a project that will:

- Maintain a strong presence of state offices in San Francisco by maintaining the location of the current statewide-serving agencies and siting future state-wide agency offices in the San Francisco Civic Center;

- Maintain the location of the local-serving state offices in the downtown or neighborhood areas;

- Consolidate San Francisco general state office space in the Civic Center;

- Maximize the number of state offices housed in state-owned buildings to ensure that the significant long-term savings from the occupancy of owned buildings accrues to the state;

- Consider the historic value and traditional use of 350 McAllister Street to ensure that rehabilitation of this asset is sensitive to those issues;

- Ensure that the full value of the state's real estate assets are realized through programs for the intensification of development on appropriate lands or the disposition of surplus lands, or both.

As part of the process to select an architect-developer-contractor team to design and construct the project, the DGS issued Design-Build Guidelines - Volume II in May 1992. Those guidelines also note major project objectives, which include the following:

- The renovation of the California State Building, in combination with the New State Office Building, should make a highly positive contribution to the Civic Center (p. 1);

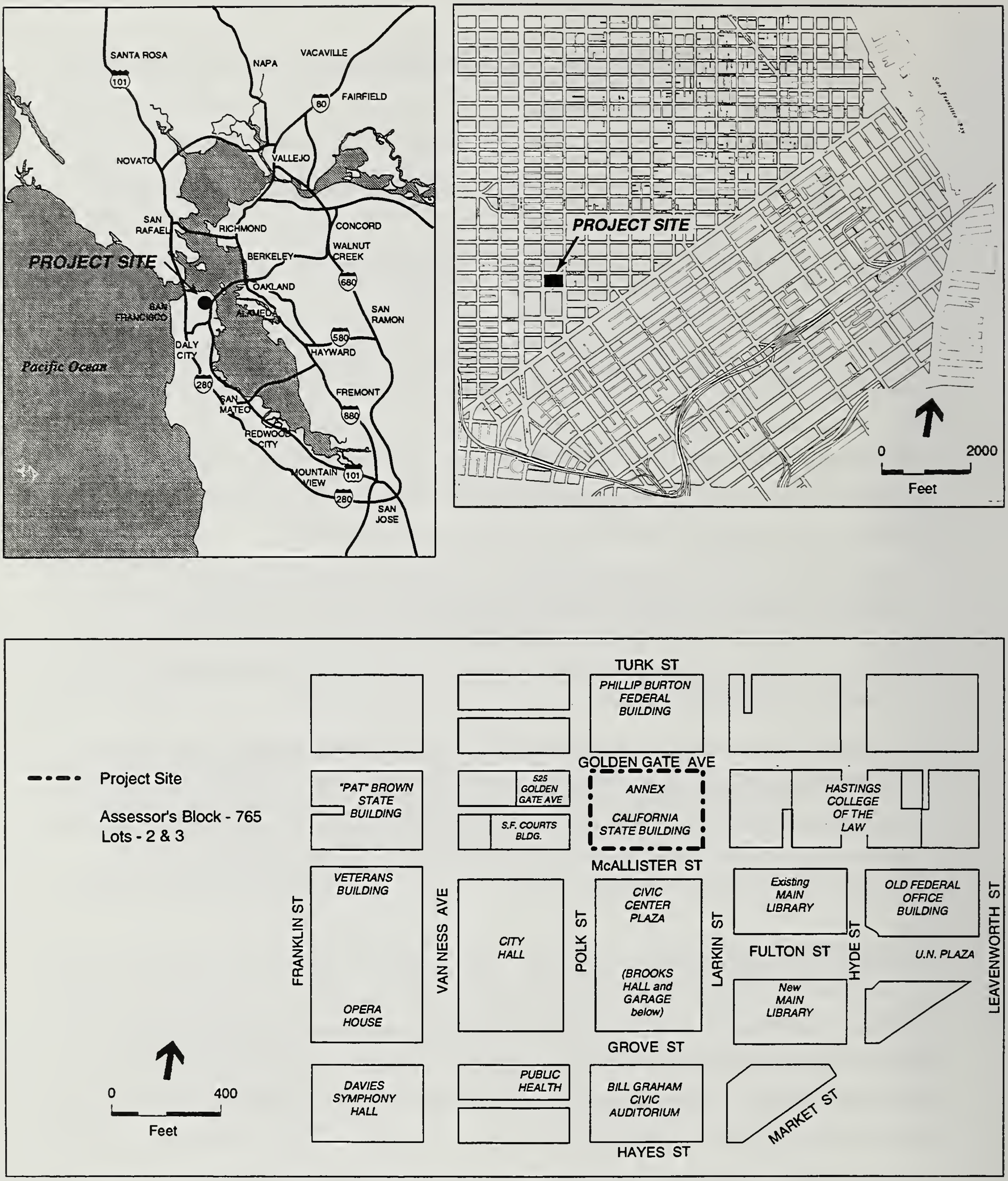
- The new building should provide a transition between the Civic Center Historic District and the surrounding area (p. 1);

- As the project is being financed by lease-revenue bonds, and the bond payback would be dependent upon continued occupancy of the building, the State's long-term investment in the New State Office Building and the California State Building must be protected against extended building vacancy. Structural systems must be capable of supporting a long life span, and quick reoccupancy after a major earthquake, as well as equal building and life safety protection to both buildings. (p. 41)

C. <u>PROJECT LOCATION</u>

The project would be in the San Francisco Civic Center in the block bounded by McAllister Street to the south, Polk Street to the west, Golden Gate Avenue to the north, and Larkin Street to the east (see Figure 1). The 113,438-sq.-ft. project site includes Lots 2 and 3, which encompass the entire Assessor's Block 765.

The site is currently occupied by two buildings: the California State Building at 350 McAllister Street, and the Annex at 455 Golden Gate Avenue. The 209,000-gross-sq.-ft., six-story State Building was completed in 1922, with major additions made in 1930. That building is set back from McAllister, Polk and Larkin Streets by a landscaped strip. As noted above, the



SOURCE: Environmental Science Associates

State Office Building EIR ■

Figure 1
Project Location

350 McAllister Street building has been vacant since 1989. The 384,000-gross-sq.-ft., seven-story Annex was completed in 1957 and is occupied by state offices. The two buildings are connected through hallways in the center of the block.

D. PROJECT CHARACTERISTICS

The project examined in this EIR includes the renovation and seismic upgrading of the existing California State Building, and the replacement of the existing Annex with a new 845,000-gross-sq.-ft. building. The total gross floor area for this project would be approximately 1,053,000 gross sq. ft. Net new square footage on the site, taking into account re-use of the State Building, demolition of the Annex and the New State Office Building space, would be about 460,000 gross sq. ft. Project characteristics are summarized in Table 1. Figures 2 to 14 show project elevations and floor plans.

The project at full occupancy would house about 2,500 state employees. As the Annex currently accommodates about 925 employees, the net increase in employment on the site from relocation of existing state employees from leased space in San Francisco with the project would be 1,575 employees. The net increase on the site from pre-1989 earthquake conditions would be about 1,200 employees. Prior to the earthquake, total employment on the site, in the two buildings was about 1,300. Future employment based in state offices housed by the project could eventually be higher than 2,500. About 2,900 employees could be accommodated through flex-time, telecommuting, job-sharing, or "hoteling" (field staff using desk or office space on an as-needed, part-time basis). For purposes of environmental analysis, 2,500 would reflect the number of employees on the site at one time.

The total gross area for the project would be 1,053,000 gross sq. ft. Total area is all space, both enclosed and covered, as defined by the outermost boundaries, or footprint, of the buildings. The project would have about 802,000 net sq. ft. (NSF) of usable space, as shown in Table 1. The net floor area excludes stairwells, non-program equipment/service areas, entrance lobbies, elevator lobbies, telephone and electric closets, mechanical rooms, shafts and exit corridors.

The project would provide a total of 743, 500 NSF of general office space to support approximately 2,500 employees. Of the 743,500 NSF, about 150,000 NSF would be provided through the renovation of the existing California State Building and about 580,200 NSF would be in the new building.

TABLE 1: PROJECT CHARACTERISTICS

	California State Building/a/	New State Office Building	Total
Gross Square Footage	208,000	845,000	1,053,000
Net Usable Square Footage	152,000	650,000	802,000
Height (ft.)	80	143-218	NA
Stories	6	11-16	NA
Parking Spaces	NA	60	60
Loading Spaces	NA	3	3

/a/ Existing gross floor area of the California State Building is 209,000 gross sq. ft.; after renovation, it would be 208,000 gross sq. ft. Net increase in gross floor area with the project would be 460,000 sq. ft. (1,053,000 sq. ft. - 209,000 sq. ft. in California State Building - 384,000 sq. ft. in existing Annex).

SOURCE: HSH Design-Build, Inc.

CALIFORNIA STATE BUILDING

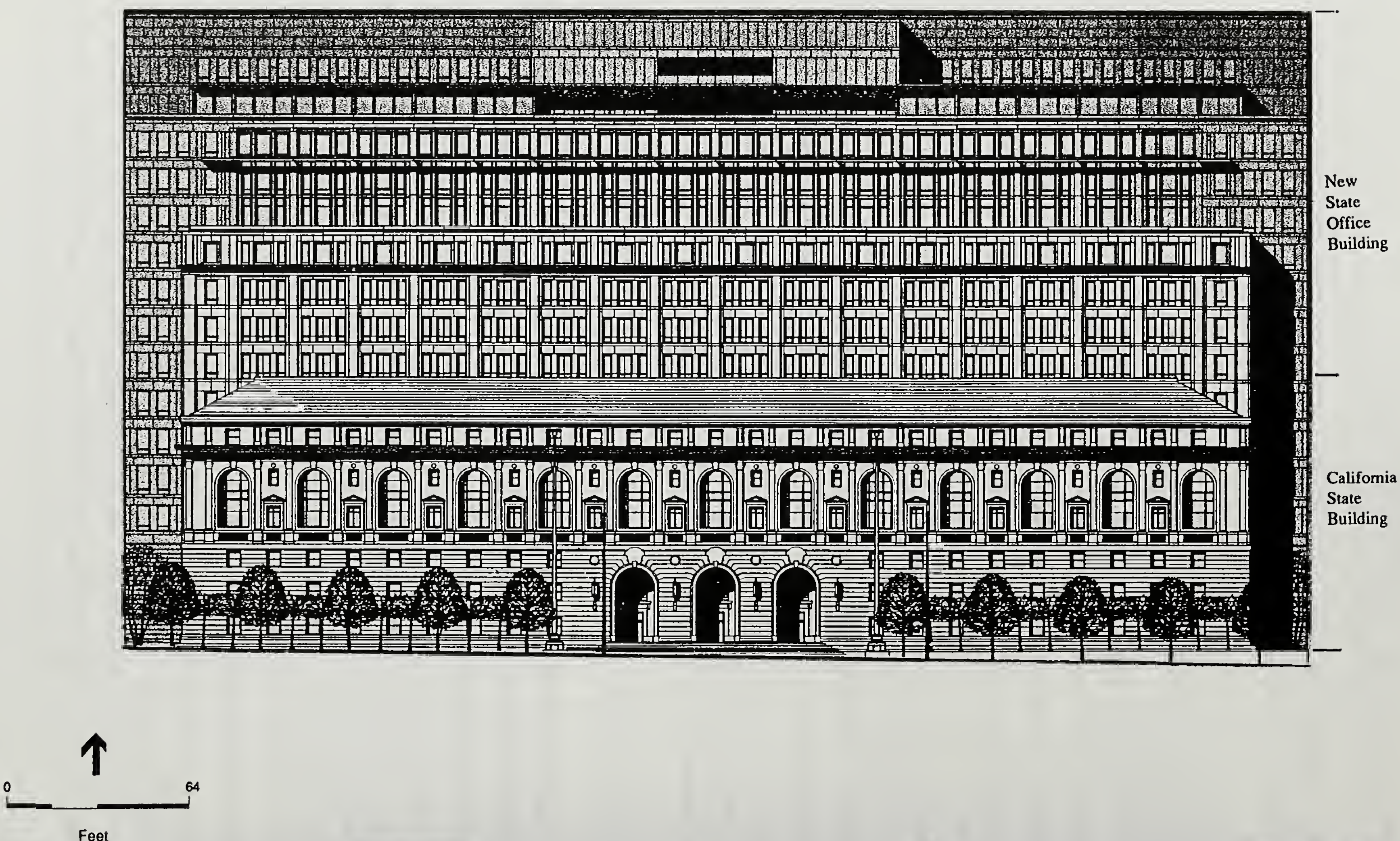
The 209,000-gross-sq.-ft. California State Building would undergo architectural and structural renovations. As shown in Table 1, after renovation the building would have about 208,000 gross sq. ft. The reduction in square footage would result primarily from the replacement of the two-story in-fill areas, dating from 1930, located in the courtyards, with new in-fill with lower square footage. Architectural renovation would include the rehabilitation of the building's exterior historic facade, the re-creation of portions of the roof in blue-gray slate tiles to match the original specifications and the restoration and/or replacement of the historically significant original exterior components in the spirit of the original design. Exterior renovation would include repair or recasting of portions of the terra-cotta "cheneau" or gutter at the cornice line; repair or replacement of damaged granite facing; repair or replacement of damaged decorative cement plaster ceilings in the entrance loggia; restoration of flagpoles near the McAllister Street entrance and on the building facade; and matching stucco surfaces on the north facades to the original granite-colored specifications. As part of interior renovations, the Supreme Court Room would be restored based upon its original design, including the re-creation of the skylit,

truncated-dome ceiling. The Arthur Mathews mural that formerly occupied the wall above the judges' bench has not been located. The project would include a clerestory window above the bench, unless the mural were found. Further discussion of the architectural renovation for the proposed project is provided in Section III.E, Cultural Resources.

The major structural components of the proposed renovation would be reinforced concrete shear walls applied behind the primary facades facing Polk, McAllister and Larkin Streets, the north walls of the east, central, and west wings, and the east and west walls of the central wing, by removing existing interior wall surfaces. (If severe deterioration has occurred on the secondary facades, the existing walls may be demolished and replaced. Exterior decorative material would be salvaged and reused.) Where they intersect the perimeter walls, existing wall and ceiling surface materials would be removed for a four-foot-wide access area for this seismic construction. The project would re-use wood molding, paneling or cabinet work. The seismic work could affect interior dimensions of some rooms and, therefore, re-installation of moldings or paneling could require trimming dimensions of salvaged material. Original flat plaster walls and ceilings would be replaced with gypsum board and a matching plaster surface, where needed. Hollow-clay tile walls surround the main stairway, and life safety considerations in an exit area would require strengthening of those walls; the project would replace those walls and certain other interior walls with new concrete shear walls.

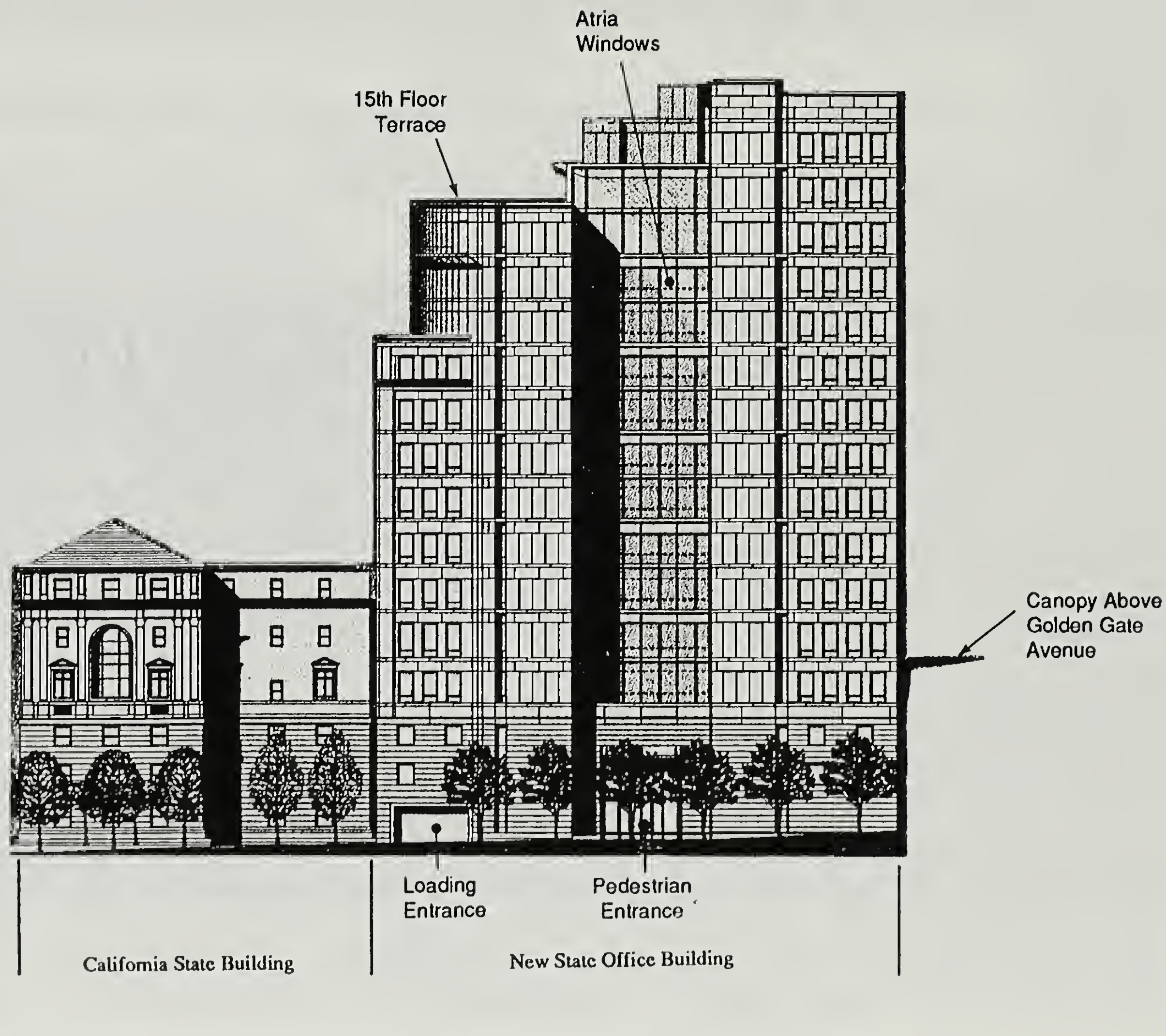
THE NEW STATE OFFICE BUILDING

The proposed 845,000-gross-sq.-ft. New State Office Building would range from 209 ft. and 16 stories at Golden Gate Avenue to about 140 ft. and 11 stories at the north side of the California State Building (see Figures 2 and 3). The design is intended to taper down the new building from near the 300-ft.-tall Federal Building north of Golden Gate Avenue, to the south at the 80-ft.-tall California State Building and other buildings of the Civic Center. The setback and massing are intended to respect the scale of the San Francisco Civic Center, the importance of the City Hall and its dome as a main architectural feature of the Civic Center, and the state's design guidelines that the new building not exceed an envelope represented by a plane from the cornice line of the Federal Building to the center of Civic Center Plaza. The massing of the new building would be a series of elements of different height and plan dimension, or "footprint." The highest element would include the 16-story element fronting Golden Gate Avenue (see Figure 4). The second element would rise 15 stories. This element would include two atria, glass enclosed spaces between the 5th and 15th levels on the east and west sides of the building



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

Figure 2
McAllister Street (South) Elevation

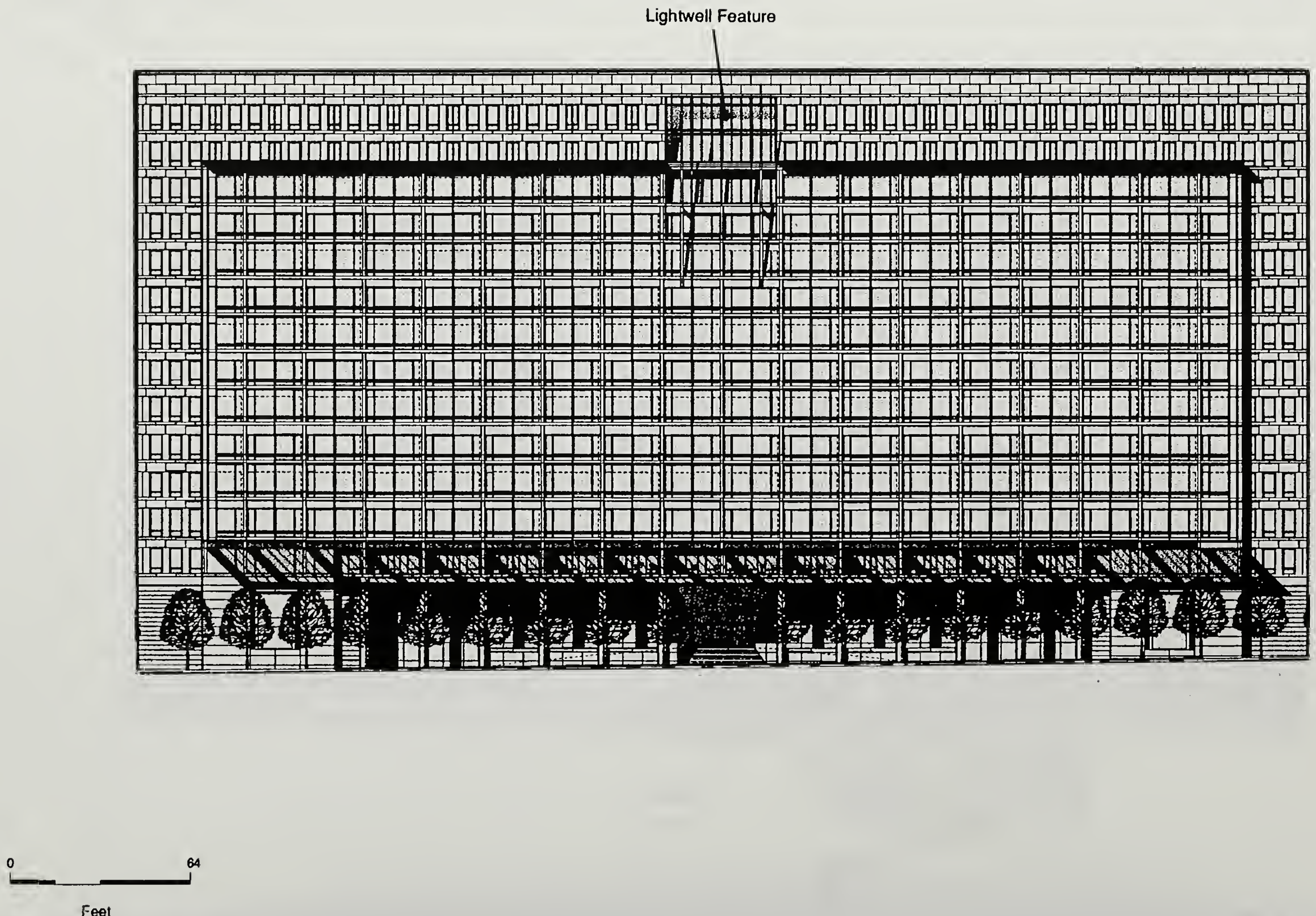


SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

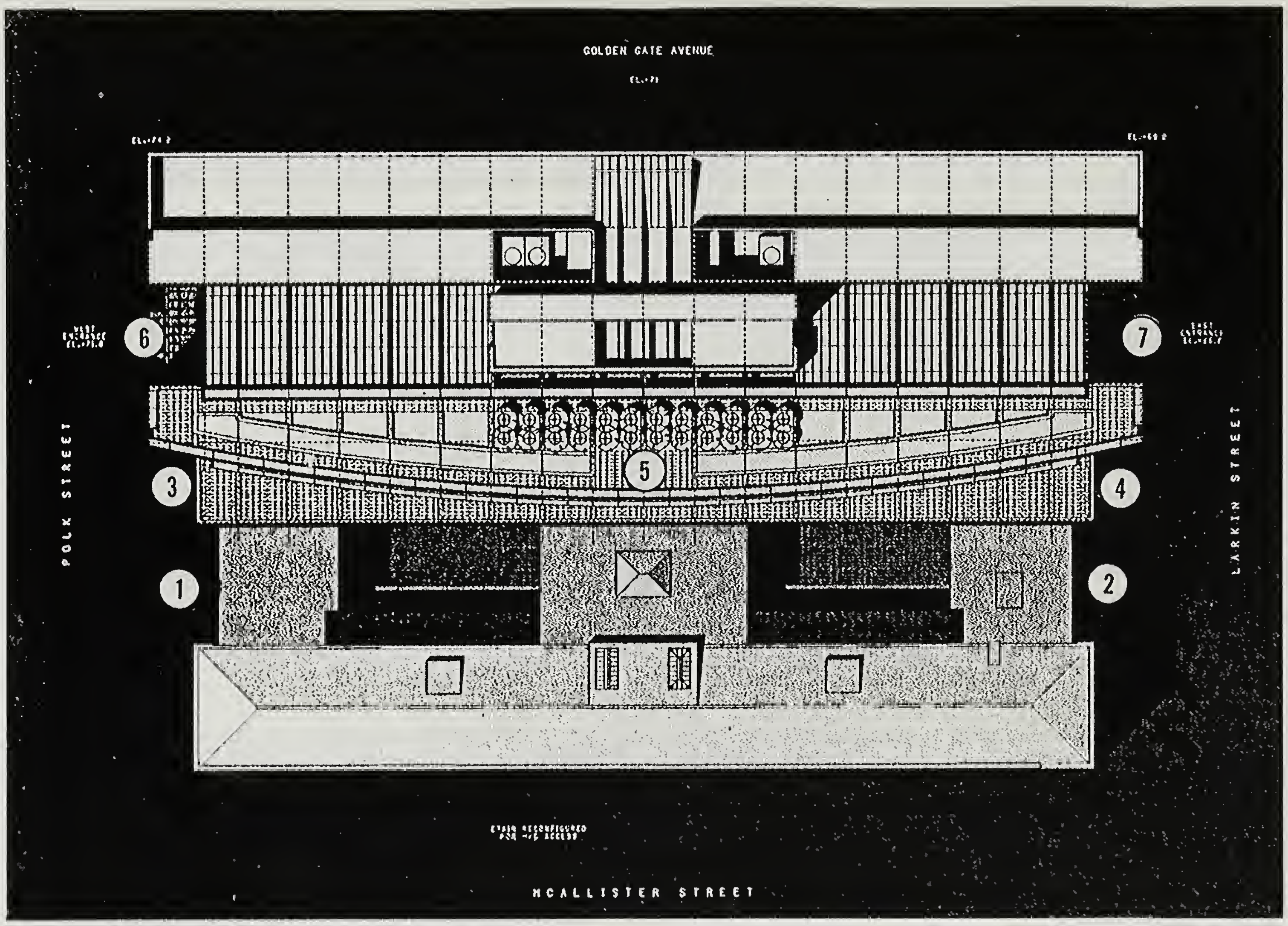
Figure 3

Larkin Street (East) Elevation



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

Figure 4
Golden Gate Avenue (North) Elevation



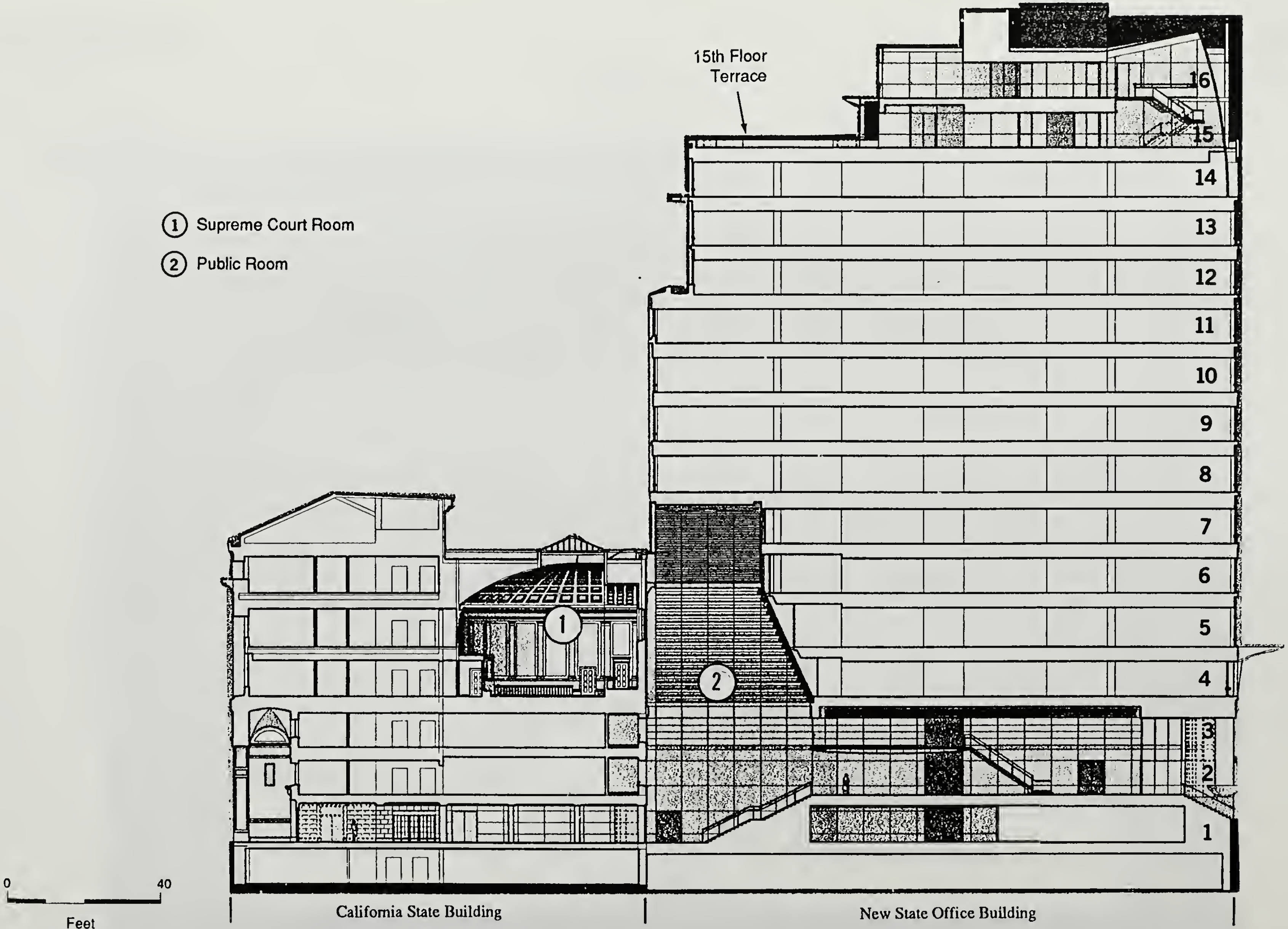
① West Garden
② East Garden
③ Parking Entrance
④ Loading Entrance
⑤ 15th Floor Terrance
⑥ West Doorway
⑦ East Doorway

0 100
Feet

SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

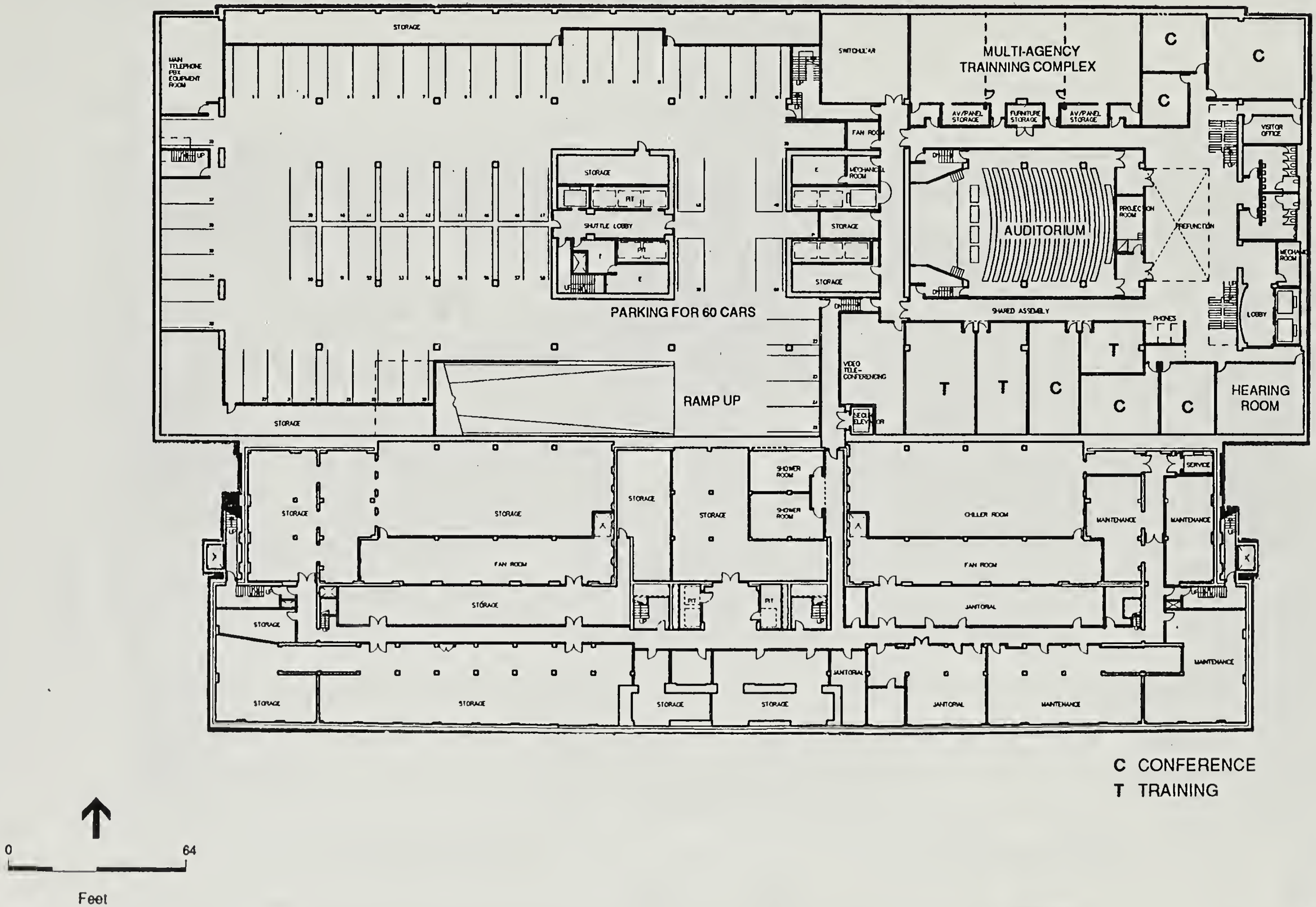
Figure 5
Site Plan



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

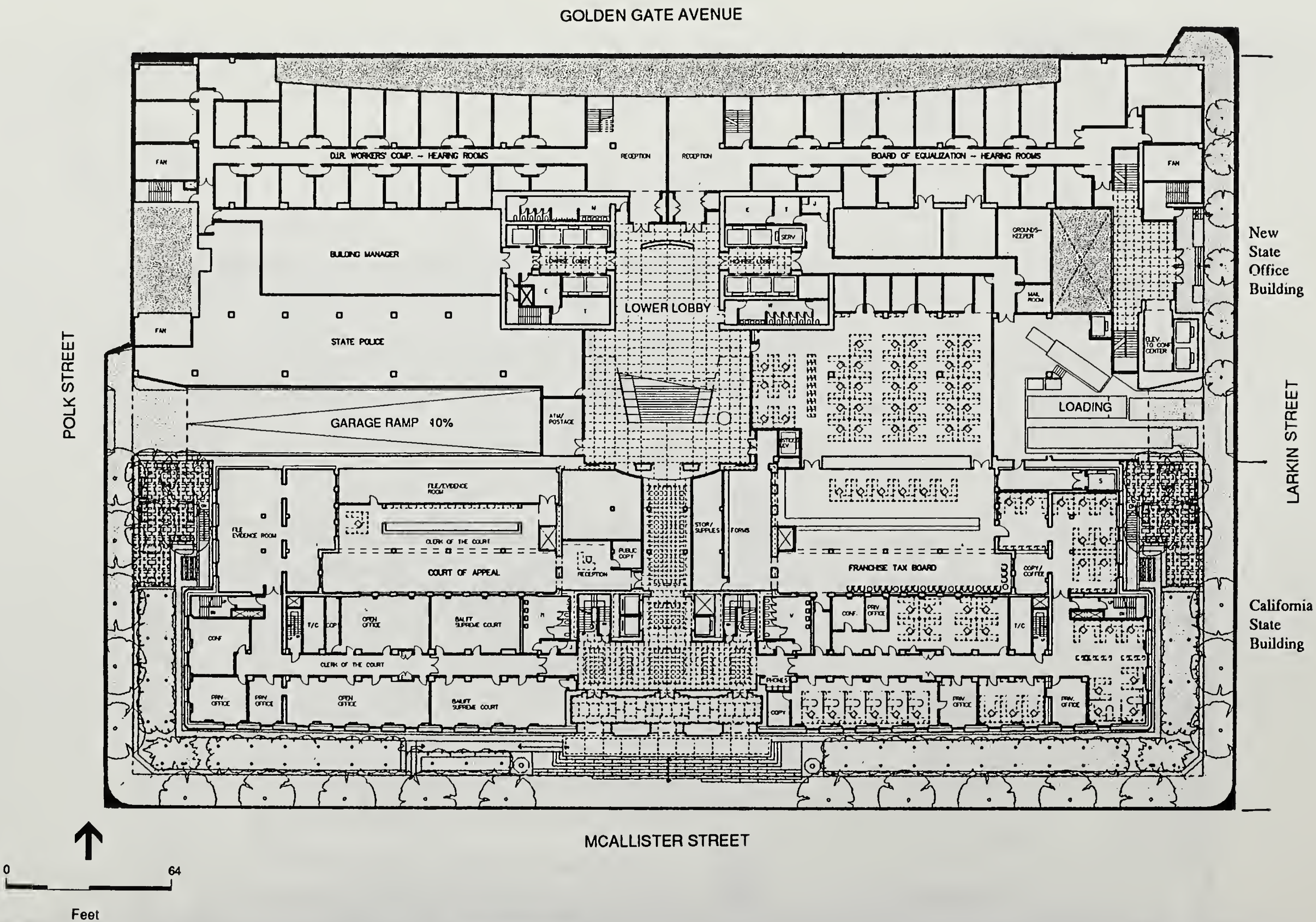
Figure 6
North-South Cross Section Through Lobbies



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

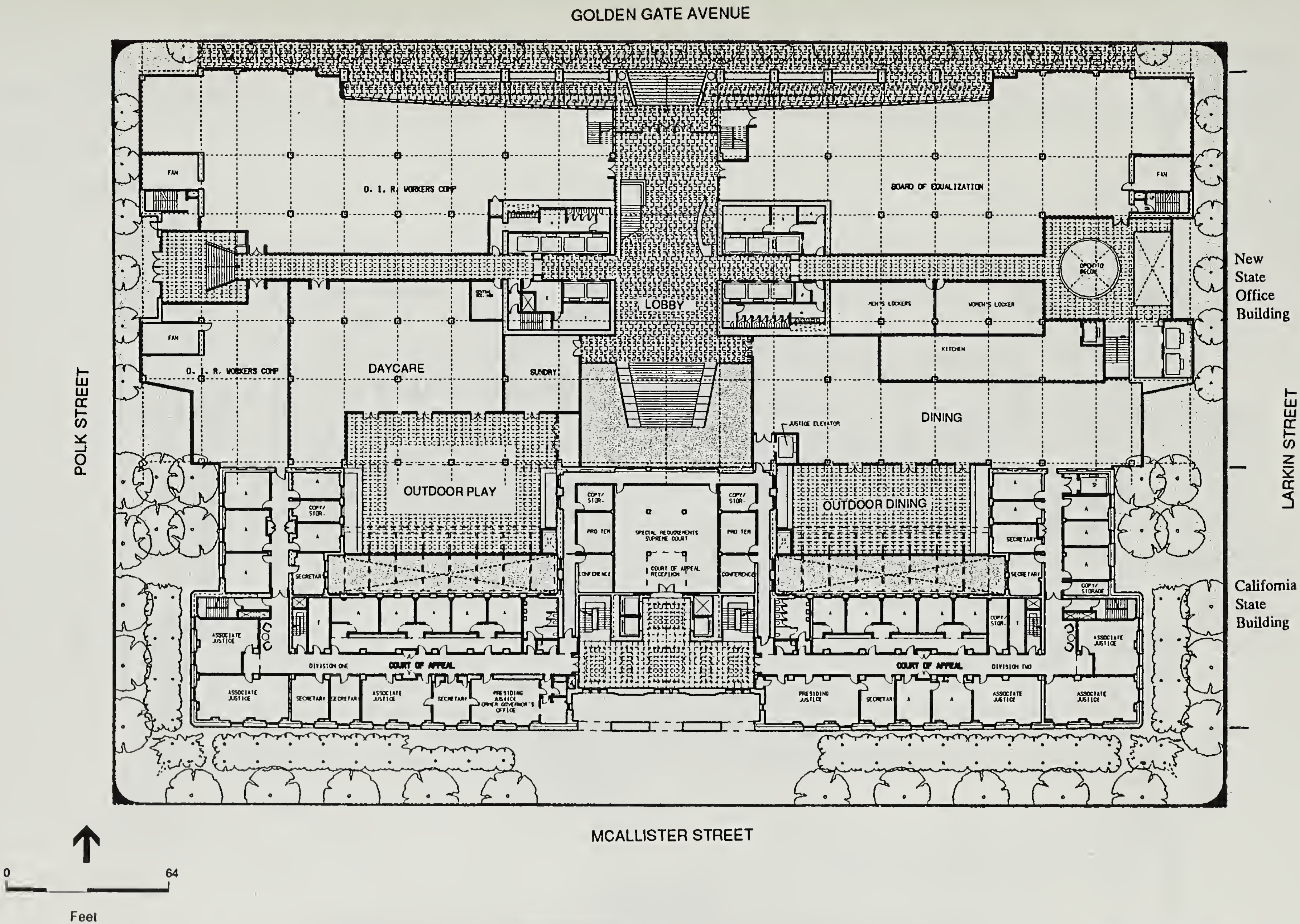
Figure 7
Lower Level



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

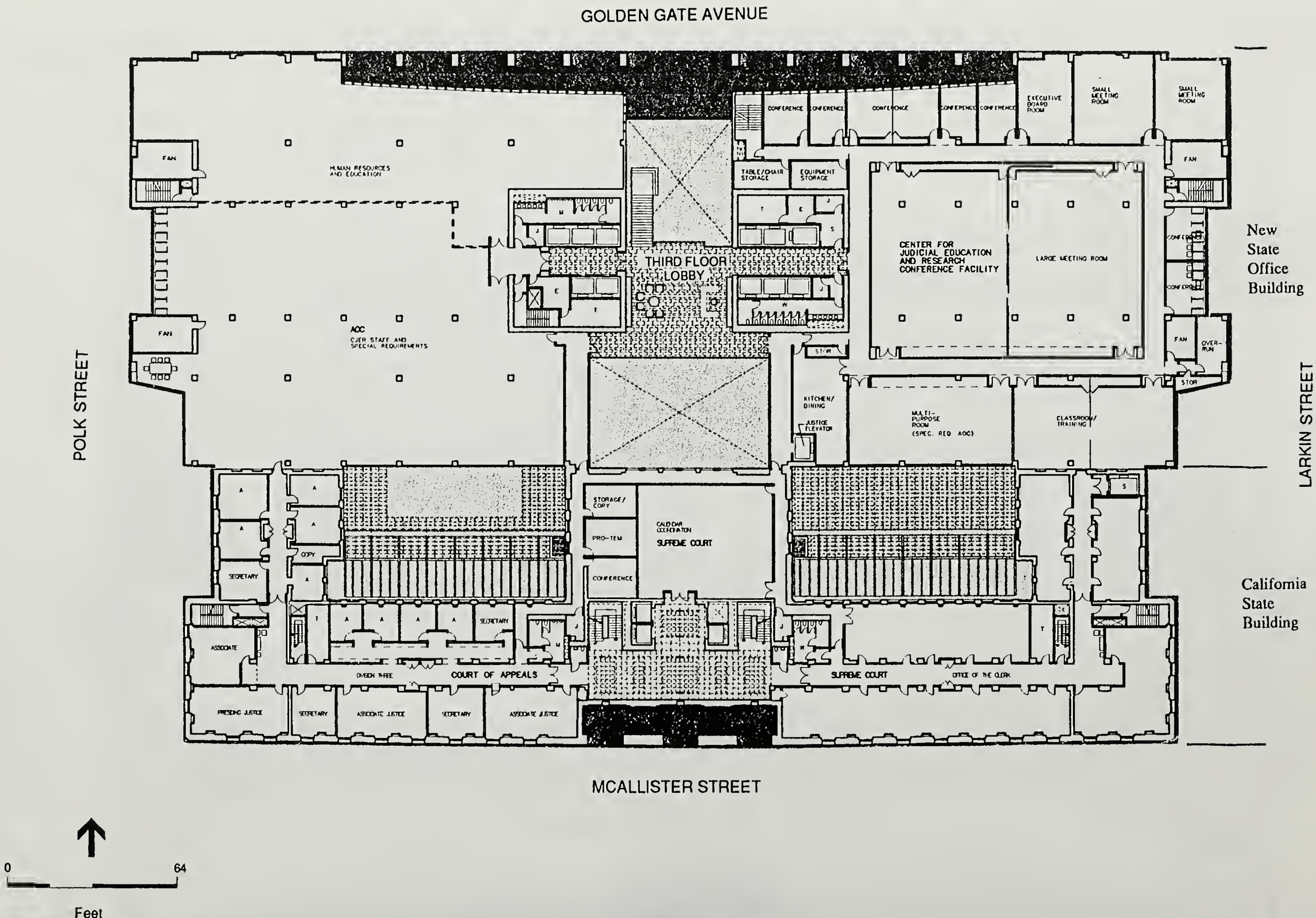
Figure 8
Level 1



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

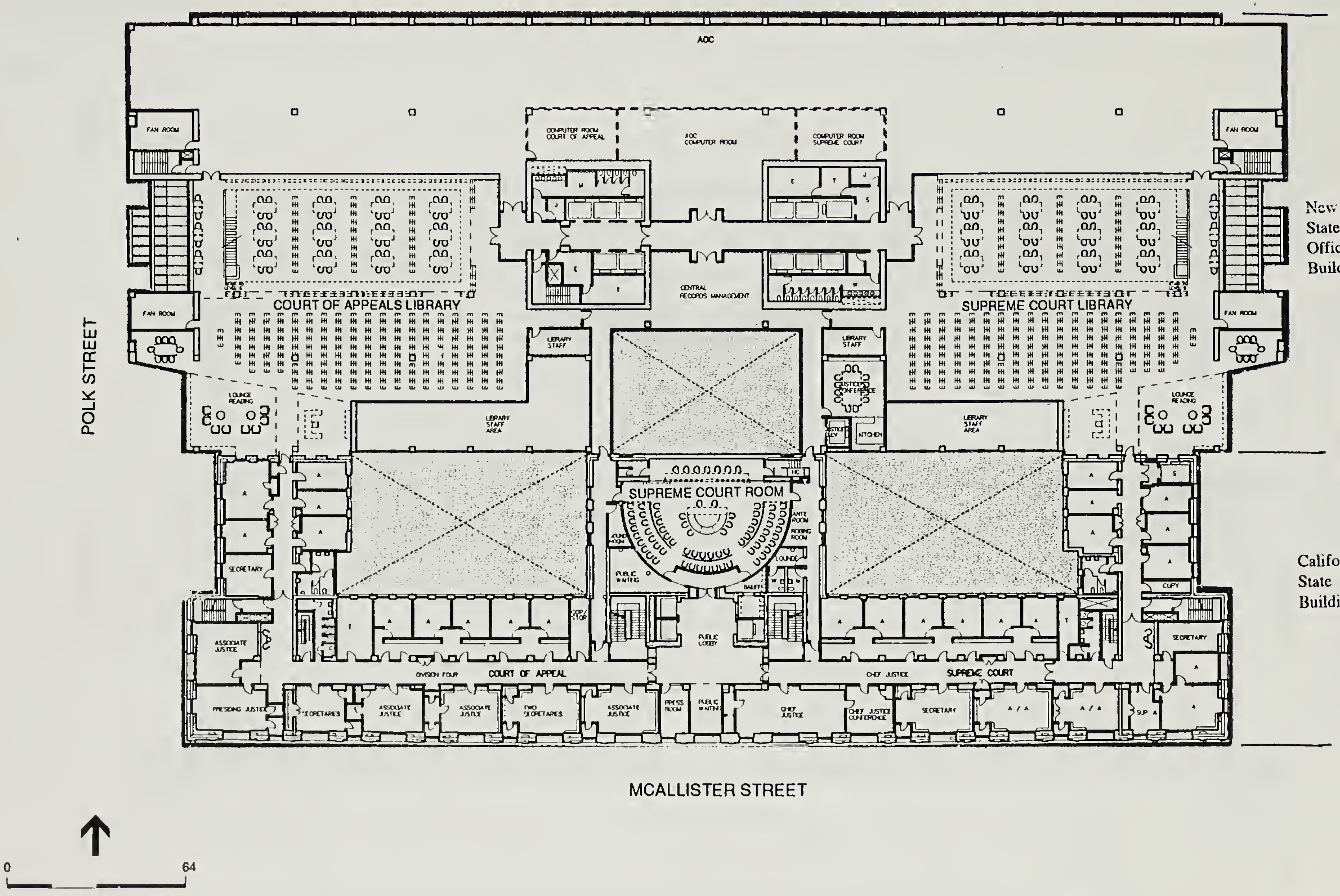
State Office Building EIR

Figure 9
Level 2



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

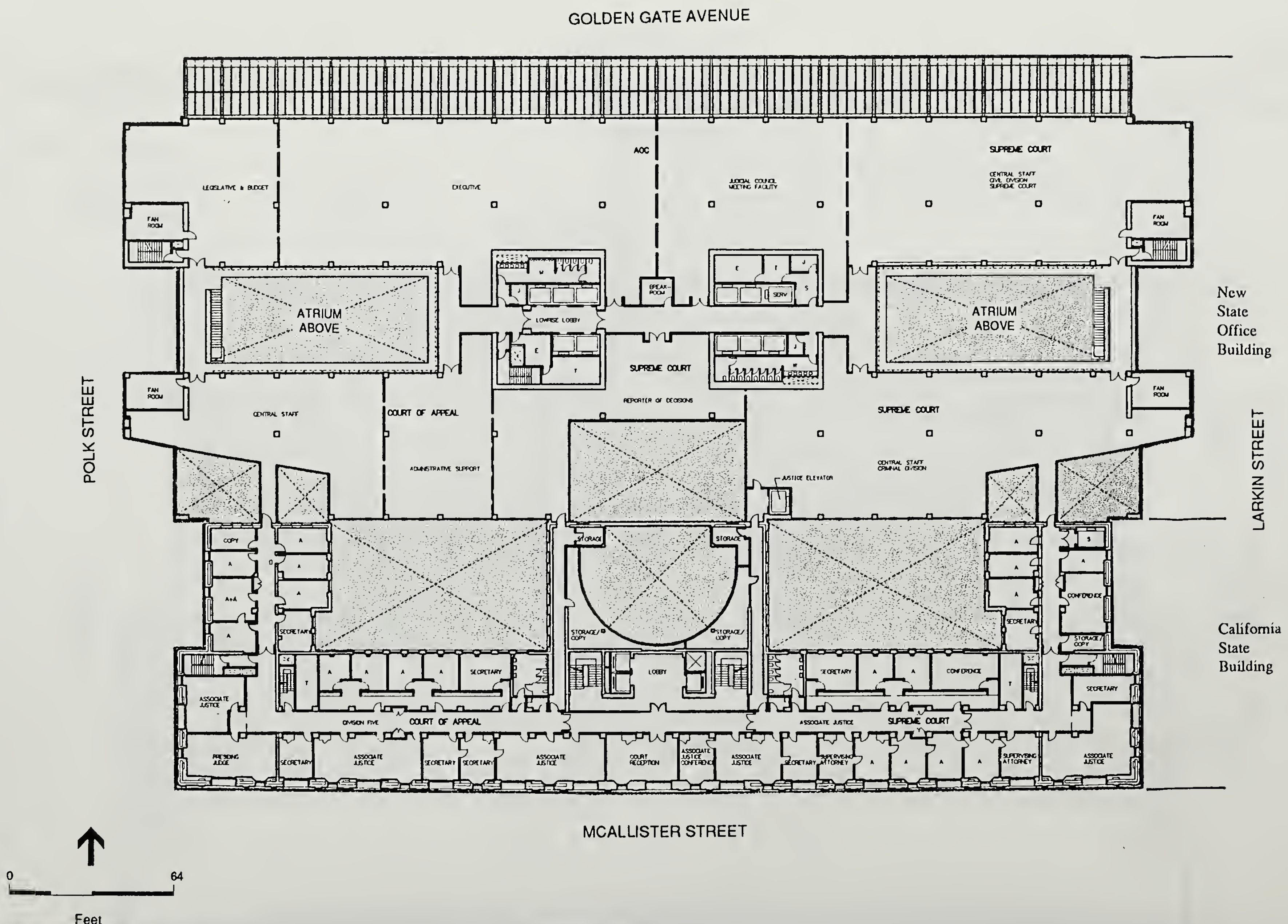
Figure 10
Level 3



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

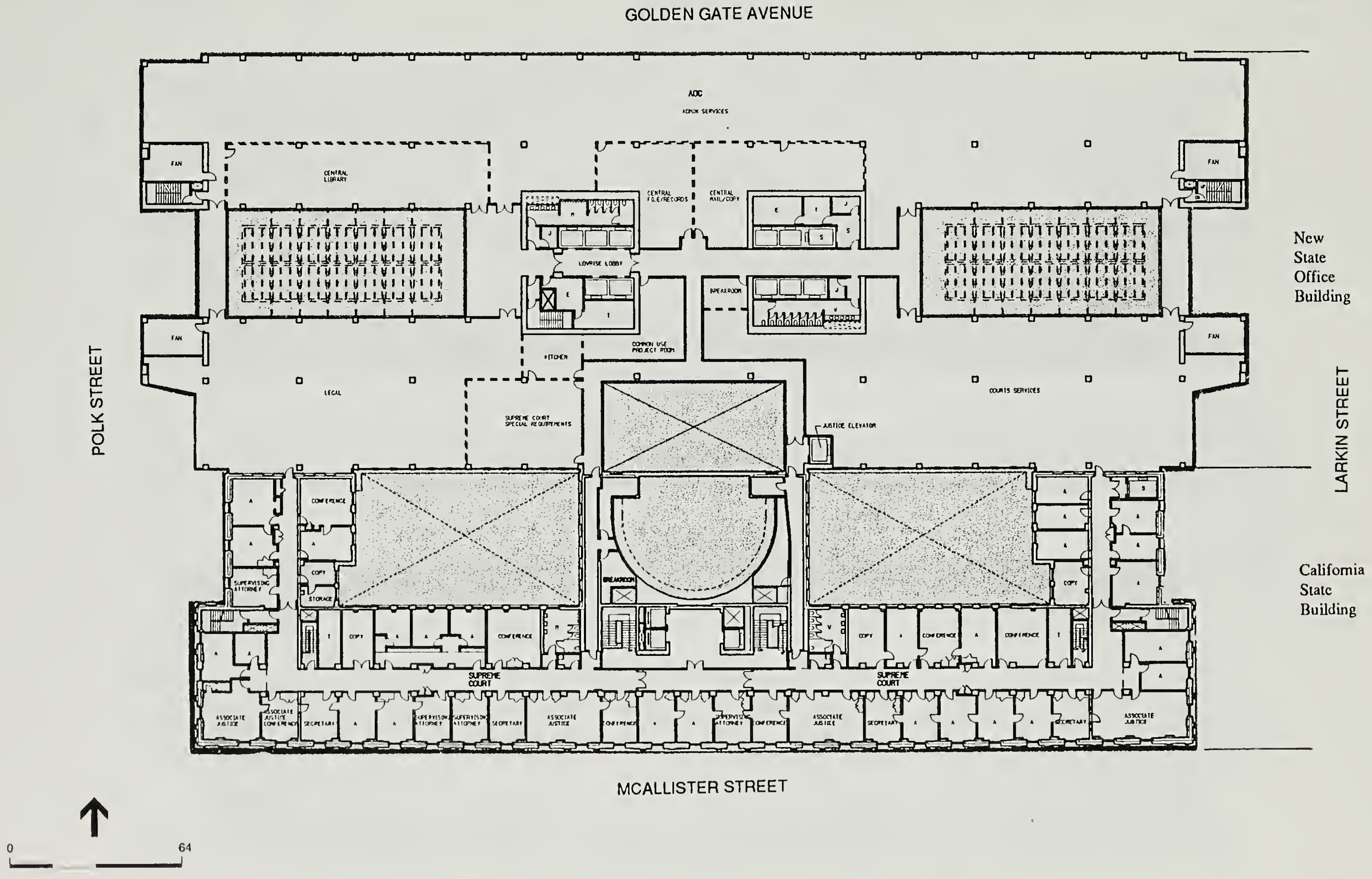
Figure 11
Level 4



SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

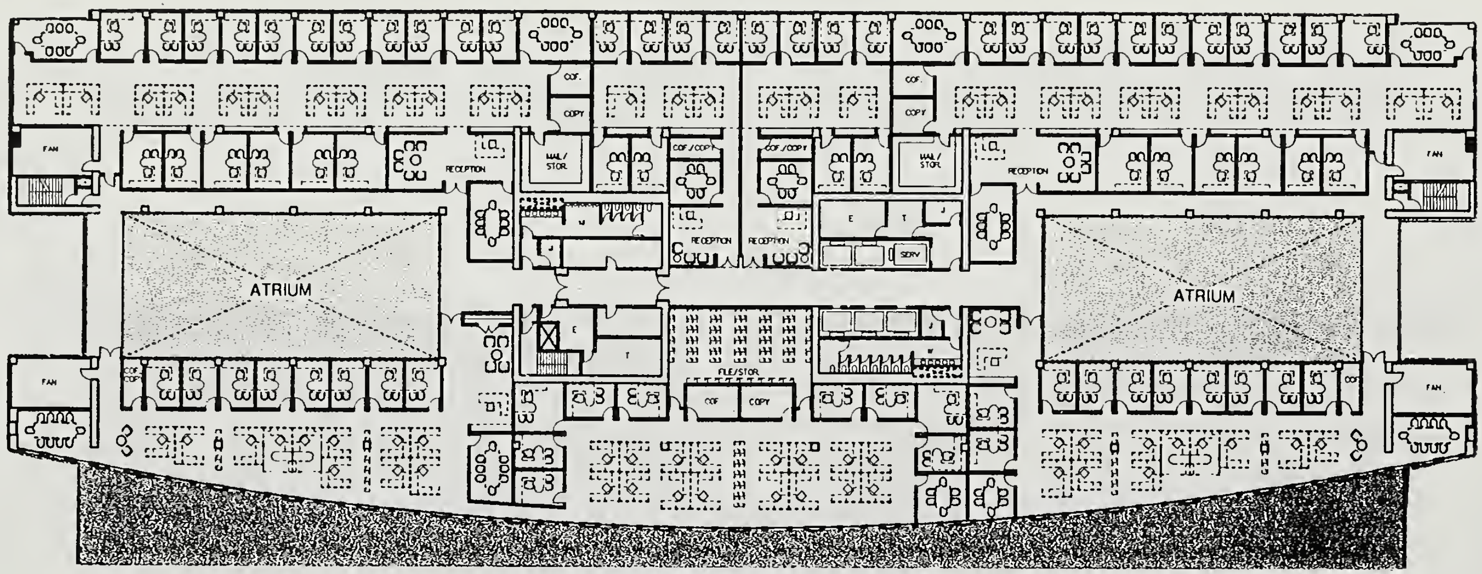
Figure 12
Level 5



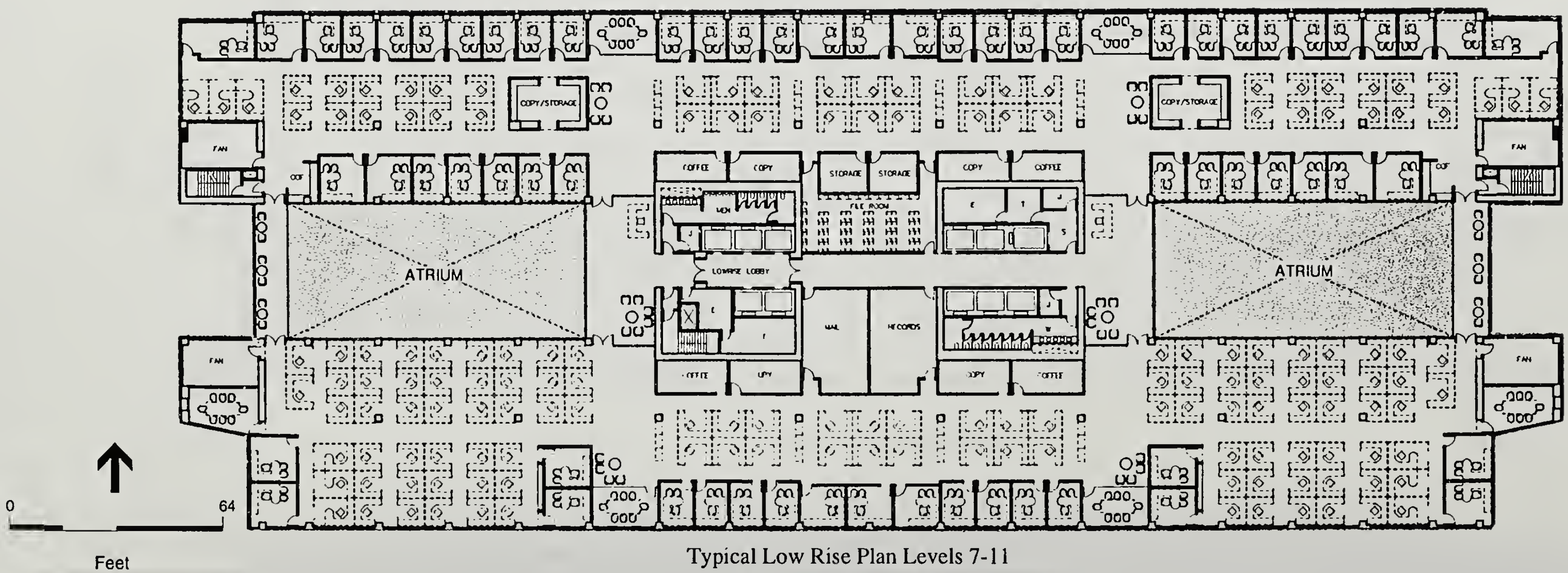
State Office Building EIR ■

Figure 13
Level 6

SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.



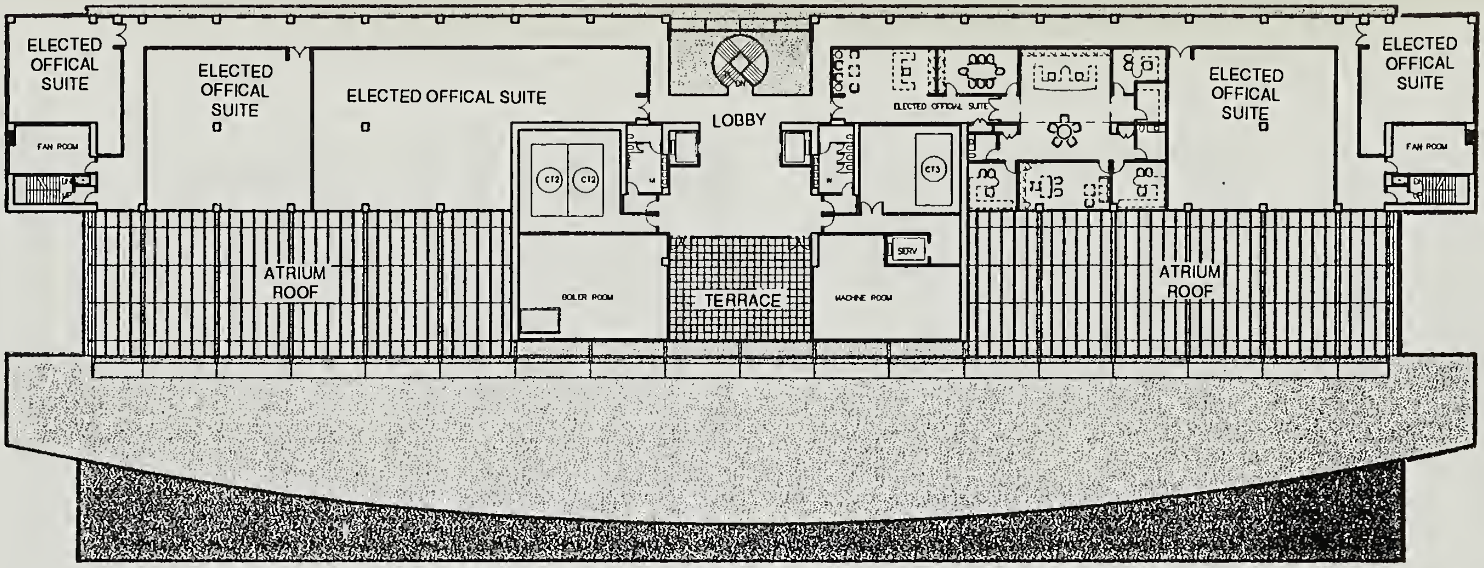
Typical Low Rise Plan Levels 7-11



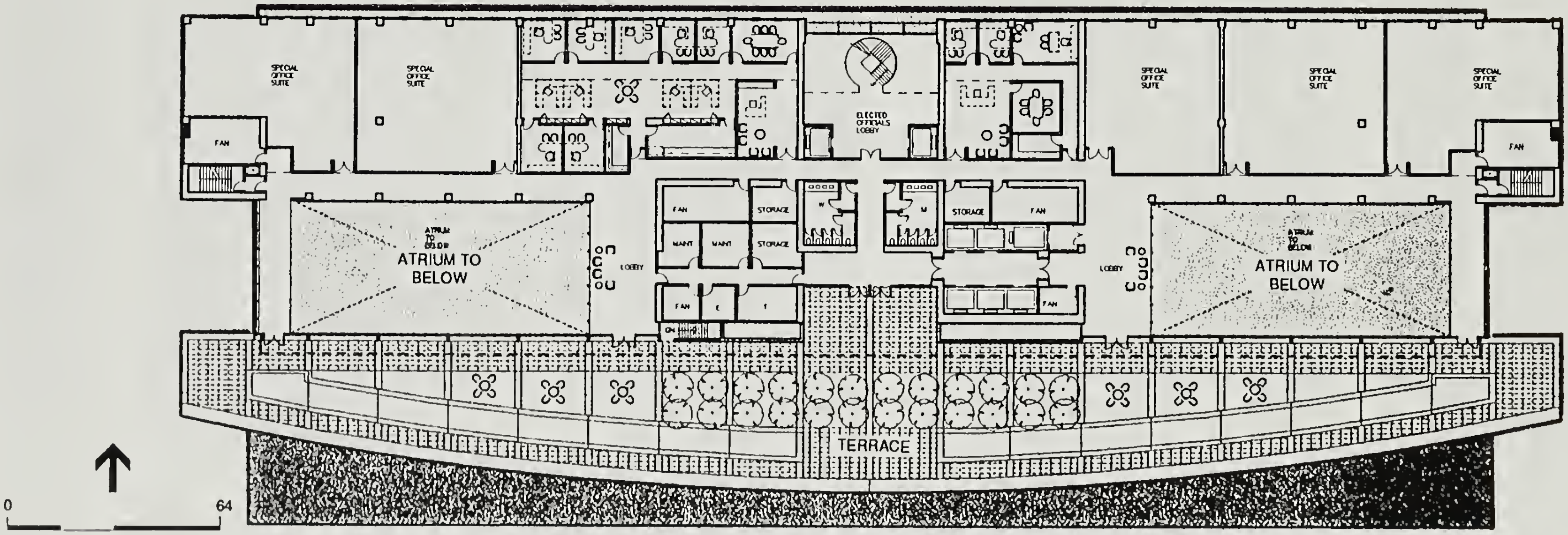
Typical Low Rise Plan Levels 7-11

SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

Figure 14
Levels 7-11 and Levels 12-14
New State Office Building



Levels 16



Feet

Levels 15

SOURCE: Skidmore, Owings & Merrill
HSH Design-Build, Inc.

State Office Building EIR ■

Figure 15
Level 15 and Level 16
New State Office Building

core (elevators, washrooms, and mechanical and other service areas). The third element, with a curved facade facing the Civic Center, would rise to 14 stories and the last element, adjacent to the California State Building to 11 stories.

The elements would vary in the plan, from the full width of the site, to setbacks matching the existing California State Building (see Figure 5, p. 11).

The facades of the new building are intended to be compatible with the California State Building. The walls of the New State Office Building would be Sierra White granite (or its equivalent) and would be detailed at the base as a continuation of the surface treatment of the base of the California State Building (see Figure 4, p. 10). Windows would have horizontal and vertical elements of granite or metallic-finish aluminum. The atria would have a closed roof with a diffusing screen of glass and aluminum that would form a trellis extending over a portion of the roof garden at the 15th level. On Golden Gate Avenue, the project would include a 22-ft.-deep canopy that would extend almost the width from Polk to Larkin Streets, about 50 ft. above the sidewalk (see Figures 3 and 4, pp. 9-10).

The project would have four pedestrian entrances, one in the California State Building and three in the proposed New State Office Building. Because of elevation differences between the streets that bound the project site, the entrances would be on two different levels of the project. The main entry at the California State Building on McAllister Street would extend north through the California State Building into the proposed Central Public Room in the New State Office Building (see Figure 6, p. 12). The second main entry on Golden Gate Avenue would lead to the second level and would extend south to a stairway leading down to the Central Public Room. The third entry, on Polk Street, in the New State Office Building would be on the second level and would lead via an east-west corridor to the main corridor from Golden Gate Avenue. The fourth entrance on Larkin Street on the first level of the New State Office Building would lead to elevators and stairs to either the main corridor or to the lower, basement level. The basement level would include an auditorium, meeting center and parking. The southerly portion of the Polk Street frontage of the New State Office Building would include the driveway to the basement-level parking for 60 vehicles with access from Polk Street (see Figure 7, p. 13). The southerly portion of the Larkin Street frontage would include the driveway to the loading dock. The dock would accommodate three trucks (see Figure 8, p. 14).

At street level, the New State Office Building would be built up to the property line on Golden Gate Avenue. A protected entry, extending most of the length of the building, would be

provided on Golden Gate Avenue by twin arcades behind the columns of the north facade. On Polk and Larkin Streets, parts of the new building would reach the property line, while the south element would have setbacks that aligned with the California State Building (see Figure 8). The existing setbacks on the Polk and Larkin frontage of the north wings of the California State Building would become two landscaped sitting areas, each about 1,200 sq. ft.

The project would integrate the space and the functions of the California State Building and the New State Office Building from the lower levels to level six, as shown in the floor plans in Figures 7 through 13, pp. 13 to 19. The description of floor-by-floor uses below includes space in both parts of the project. The basement level of the building, with approximately 100,400 gross sq. ft., would contain a 300-seat auditorium, other conference and training rooms, 60 parking spaces, storage rooms and mechanical facilities (see Figure 7, p. 13). The auditorium would be in the New State Office Building, near the Larkin Street entrance. The conference and training rooms would be adjacent to the auditorium. The parking area would occupy the rest of the New State Office Building basement. Mechanical and other service areas would occupy the California State Building basement.

With approximately 91,800 sq. ft., the first floor would house Court of Appeal and Supreme Court support space, the Franchise Tax Board, hearing rooms for the Board of Equalization, and the Department of Industrial Relations (DIR) Workers Compensation, state police and building manager's facilities (see Figure 8, p. 14). The California State Building lobby and north-south corridor at the first floor would lead to the Central Public Room. That space would rise to a ceiling at the seventh floor (see Figure 5, p 11). The Public Room would have clerestory windows above the central wing of the California State Building.

The 82,400-gross-sq.-ft. second floor would include Court of Appeal offices, the DIR, the Board of Equalization, the cafeteria and day-care center (see Figure 9, p. 15). The two open courtyards formed by the three north-south wings of the California State Building would serve the day-care center on the west, and outdoor dining on the east. The Board of Equalization and the DIR would occupy the offices fronting Golden Gate Avenue, separated by the main lobby corridor. The main corridor at the second floor would link the stairs in the Central Public Room to the stairs to a landing at the third floor; that third floor landing would be open to the Central Public Room (see Figure 5, p. 11).

Floors three through six would be occupied by offices related to the Supreme Court and Court of Appeals, with floor sizes from about 76,800 gross sq. ft. to about 85,900 gross sq. ft. The third

floor of the California State Office Building would have two L-shaped corridors, separated by the Supreme Court lobby. The New State Office Building would contain the Center for Judicial Education and Research Conference Facility, other Administrative Offices of the Courts (AOC) space, and training and meeting rooms (see Figures 10 to 13, pp. 16 to 19).

The fourth and fifth floors of the California State Office Building would have a U-shaped corridor, with the renovated Supreme Court Room and public lobbies in the center. The New State Office Building fourth floor would house the Court of Appeals and Supreme Court libraries (see Figure 11). The New State Office Building fifth floor would include administrative space for the Supreme Court and the Court of Appeal. The two atria would start on the fifth floor and reach to the 15th floor (see Figure 12). The sixth floor would include Supreme Court offices in the California State Building, and courts services in the New State Office Building (see Figure 13).

Floors 7 through 14 in the New State Office Building would be occupied by other state agencies that would be relocated to the proposed project. These eight floors would have an "H" shaped plan, formed by the two atria. The atria space would allow natural light to enter windows and walkways facing the atria. This atria plan would break up large floor areas, and would create work spaces not more than 30 ft. from natural daylight. Floors 7 through 11 would have approximately 52,000 to 53,000 gross sq. ft. and floors 12 through 14 would have approximately 47,000 gross sq. ft. (see Figure 14, p. 20).

The 15th and 16th floors would include suites for elected officials, mechanical equipment facilities and outdoor terraces (see Figure 15, p. 21). On the15th floor, the suites front Golden Gate Avenue. On the 16th floor, the suites face south. The mechanical areas would be in the center of the floors, facing Civic Center Plaza. Outdoor spaces, accessible to employees, on these floors would include a 14,800-sq.-ft. roof garden facing Civic Center Plaza on the 15th floor and a 1,200-sq.-ft. roof terrace on the 16th floor.

PROPOSED PROJECT OCCUPANCY

Consistent with project objectives, the project would primarily house statewide-serving and local-serving state agencies. Table 2 lists the major agencies, employees, and floor area expected to occupy the project. This breakdown is provided for informational purposes. Final

TABLE 2: PROPOSED USES AND NET SQUARE FOOTAGE, NEW STATE OFFICE BUILDING PROJECT

Type of Space	Use	Net Usable Square Feet
Courts and General Office Space	Supreme/ First District Appellate Court Judicial Administrative Offices	291,000
	Department of Industrial Relations (DIR)	164,500
	DIR Workers Compensation	21,100
	Franchise Tax Board (FTB)	19,400
	Board of Equalization	18,800
	Security / State Police	6,000
	Elected Officials (6 small suites)	13,800
	Special Office Space	208,900
	Subtotal	**743,500**
Special Support Space	Lobby, Display Area, Postage, ATM, and Information Counter	2,800
	Auditorium	7,300
	Video Teleconferencing Room	900
	Day Care Center	4,600
	Kitchen/Cafeteria	7,400
	Shared Assembly Rooms	7,000
	Multi-Agency Training Complex	3,600
	Loading Dock Office (Mail and Groundskeeper)	700
	Staff Locker and Shower Rooms	1,800
	Other uses/a/	22,600
	Subtotal/a/	**58,700**
	TOTAL	**802,000**

/a/ Rounded; includes Central Security Monitoring Room and Console, Mail Room, Main PBX Equipment Room, Microwave Equipment Room, Building Manager Office, Break Rooms, Loading Dock, Bulk Storage, Maintenance Shops, Janitorial Space, Sundry Shop.

SOURCE: HSH Design-Build, Inc.

agency space assignments and occupancy patterns could vary from Table 2. With the exception of Supreme Court and Appellate Court uses, the project would provide general office uses. Final occupancy patterns would not be expected to affect the conclusions of the analyses in this EIR.

E. PROJECT SCHEDULE

The project would take about three years to develop and construct, as follows:

Tasks	Start	Complete
Complete Environmental Review		March 1995
JPA Approval of Project		March 1995
Demolition of the Annex	September 1995	December 1995
Construction/Renovation	September 1995	November 1997
Interior Finishing	August 1996	February 1998
Begin Occupancy	November 1997	May 1998

While the project is under construction, state agencies now occupying the Annex would be housed in temporary existing leased office space in various locations in the Civic Center or other areas of downtown San Francisco.

The State is using a modified design-build procedure for the development and construction of the proposed project. Under this method, a two-stage process was used to select the design-build team for the project. The first stage consisted of teams submitting qualifications demonstrating their technical expertise in areas of project management, construction management, architectural and engineering disciplines, historic building preservation/rehabilitation, and other technical areas. Based upon the qualifications submitted, a total of eight teams were selected to participate in the next stage. The second stage was also a two-step process, based first on more detailed technical qualifications, and secondly on design. The technical proposals were required to include a detailed management plan and statements of qualifications of the proposed management and design personnel. Following review of the technical proposals, the State selected three teams to develop and present a design proposal that would meet or exceed established design and performance criteria within the budget established for the project. The design criteria included detailed guidelines relating to urban context and building design, space programming, structural systems and seismic renovation, fire-life safety requirements, building environment standards, and utility and mechanical systems. Both Stage 1 and Stage 2 provided

the teams with opportunities for controlled questions/answers, and proposal clarification in Addenda that were issued to all proposers.

During August 1994, the three design-build team finalists presented their design proposals to a selection panel of state and local officials and design professionals; the team of HSH, Inc. was selected. The HSH, Inc. team includes Hines Interests Limited Partnership, developer; Skidmore, Owings and Merrill, architects; George Hyman Construction Company, general contractor; and Page & Turnbull, historic preservation architects. The designs provided by the other two teams are not subject to further consideration.

The current design phase involves contract negotiations, further design development by HSH, Inc. and completion of the environmental review process, which must be completed prior to project approval. The final phase will include completion of contract documents, bidding, demolition, construction or renovation. Consultation with the State Historic Preservation Office also occurs during the current phase because the selected building design is at the preschematic level, which allows further consideration and design for historic architectural issues.

HSH, Inc. will implement mitigation measures as required, with the Joint Powers Authority and Department of General Services, the co-lead agencies (as described below), retaining ultimate responsibility for implementing the mitigation monitoring plan.

F. PROJECT APPROVALS

The formal entity financing the project is the San Francisco State Building Authority (Authority). The Authority was formed in 1982 by the State of California, acting through the Director of the Department of General Services (State), and the Redevelopment Agency of the City and County of San Francisco (Agency) entering into a Joint Exercise of Powers Agreement to finance the acquisition of land and the design and construction of the State Office Building at 505 Van Ness Avenue. The agreement has been amended to provide for the design, construction and financing of the proposed project. A Memorandum of Understanding of December 14, 1993, between the Director of General Services and the San Francisco State Building Authority specifically allows the DGS Office of Project Development and Management (OPDM) to provide staff for the Authority.

The Authority and the DGS will function as Lead Agency for purposes of environmental review, for project review and approval, and for oversight of the design-build process.

NOTES - Project Description

1 State of California Department of General Services, Office of Project Development and Management, *San Francisco/Oakland State Facilities Plan*, May 1992.

2 Assembly Bill No. 896, Statutes of 1993, Chapter 429, approved by the Governor on September 21, 1993.

III. ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION

A. LAND USE COMPATIBILITY AND POLICY CONFORMANCE

SETTING

Land Use

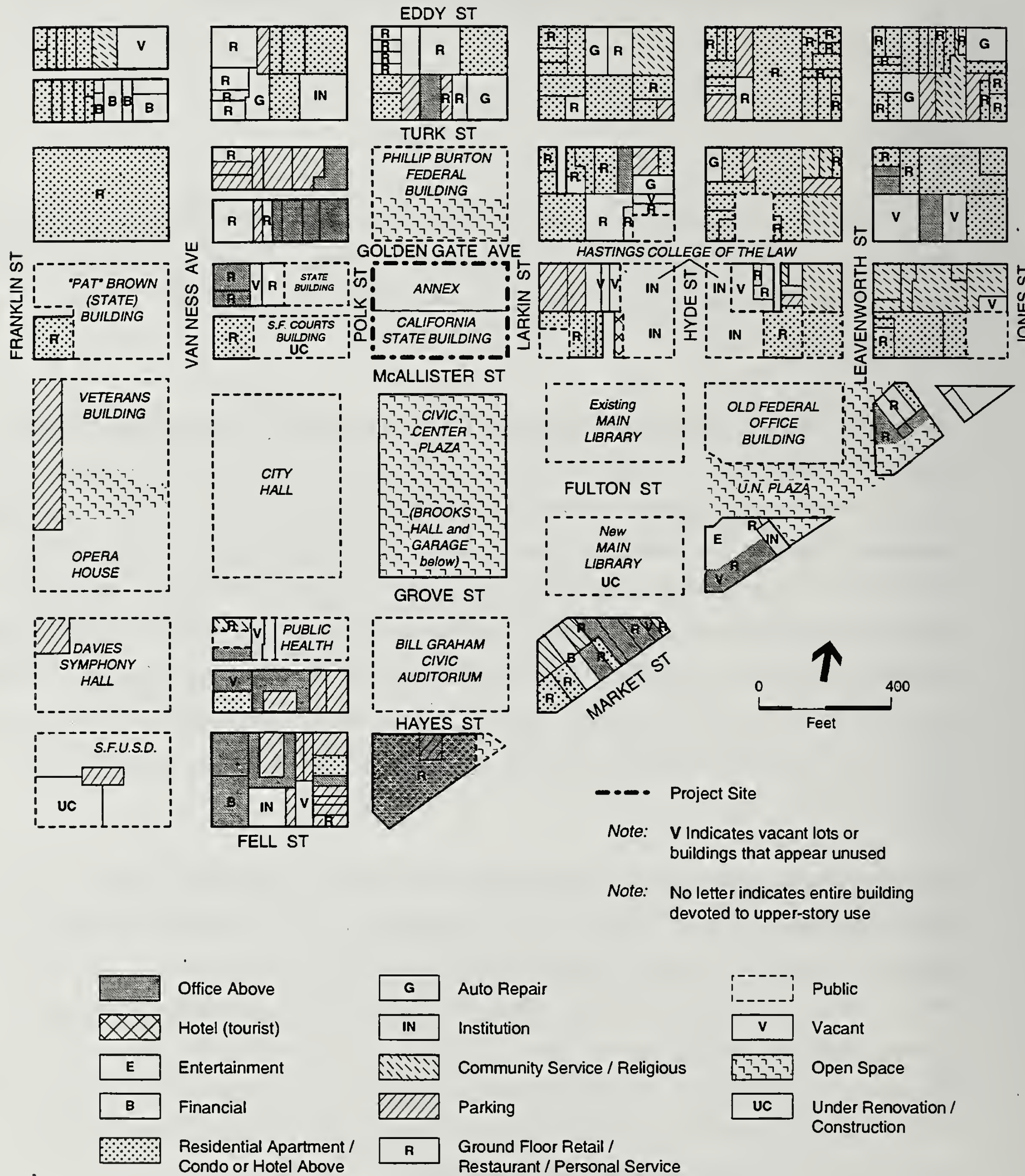
The 113,438-sq.-ft. project site consists of the full block located directly north of Civic Center Plaza in the San Francisco Civic Center. The site is now occupied by the 208,000-gross-sq.-ft. California State Building at 350 McAllister Street and the 384,000-gross-sq.-ft. Annex at 455 Golden Gate Avenue.

The Civic Center is identified and functions as a central area for governmental and cultural activity. Governmental activities and offices, private offices, retail, restaurant, performing arts and residential uses, and historic landmarks surround Civic Center Plaza (see Figure 16). Many residential and office structures have ground-floor retail (including restaurant and personal service) uses. Land uses within the project vicinity consist of public buildings framing Civic Center Plaza, including City Hall on Polk Street between Grove and McAllister, the Department of Public Health at Grove and Polk Streets, the Bill Graham Civic Auditorium (south of the plaza on Grove Street), and the Main Library and New Main Library (under construction and expected to be completed in late 1995) on Larkin Street between McAllister and Grove (bisected by Fulton Street).

These buildings are surrounded by a second ring of government and public buildings: the Old Federal Building on United Nations Plaza; the headquarters of the San Francisco Unified School District on Van Ness Avenue and Hayes Street; the Louise M. Davies Symphony Hall on Van Ness Avenue at Grove Street; the War Memorial complex, including the Opera House and Veterans Building, which houses the Herbst Theater and the former San Francisco Museum of Modern Art on Van Ness Avenue between McAllister and Grove (the museum will move to its new building on Third Street in early 1995); and the Edmund G. "Pat" Brown State Office Building at 505 Van Ness Avenue at McAllister Street.

FIGURE 16

EXISTING LAND USES IN THE PROJECT AREA



SOURCE: Environmental Science Associates

State Office Building EIR ■

Figure 16
Existing Land Uses
in the Project Area

Brooks Hall (an underground exhibit hall) and Civic Center Garage are beneath Civic Center Plaza, directly south of the project site. Civic Auditorium is linked to the subterranean Brooks Hall via a pedestrian walkway beneath Grove Street. Land uses to the north of the project site include public, mixed-use retail, office space and parking lots. Office, retail, automotive services and parking lots are northwest of the project site on Golden Gate and Turk, between Van Ness Avenue and Larkin Street. The Phillip Burton Federal Building at 450 Golden Gate Avenue is directly to the north, across Golden Gate Avenue. The Federal Building is currently undergoing asbestos removal activities that are expected to be completed by 1995. Uses northeast of the proposed project site, on Golden Gate Avenue between Larkin and Hyde Streets, include housing and retail. Across Larkin Street, between Golden Gate Avenue and McAllister Street, is Hastings College of the Law's "Westblock," which includes a parking lot, three apartment buildings, the Civic Center Steam Plant and Hastings College of the Law. Uses west of the proposed project site include the (vacant) State Building at 525 Golden Gate Avenue, the City of San Francisco Courts Building, under construction at Polk and McAllister Streets, and retail/residential uses fronting Van Ness Avenue.

Beyond the immediate vicinity of the project, north and east of the project site, moving away from the Civic Center Area, the principal land uses change from public and governmental uses to housing, retail and community services. The Tenderloin neighborhood is considered by the North of Market Planning Coalition to be bounded by Post, Powell, Market Streets and Van Ness Avenue.[1] The principal land use in the area is housing, including apartments and residential hotels, and non-profit-run family and senior residential hotels. Retail, restaurants and other service businesses are found on the ground floor of most buildings. Public or related uses in this neighborhood include a U.S. Postal Service box unit at Hyde Street and Golden Gate Avenue, the City of San Francisco's Fire Department Headquarters on Golden Gate Avenue, between Hyde and Leavenworth Streets, and the PG&E substation at Eddy and Larkin Streets. Religious, health, educational, employment and various other community services are also found throughout the neighborhood, with a cluster located on Golden Gate Avenue, between Hyde and Jones Streets. In 1985, the City adopted the North of Market Residential Special Use District, City Planning Code Section 249.5, with controls intended to protect and enhance important housing resources in an area near downtown, conserve and upgrade existing low-and moderate-income housing stock, preserve buildings of architectural and historic importance, and preserve the existing scale and development, maintain sunlight in public spaces, encourage new in-fill housing at a compatible density, limit the development of tourist hotels and other commercial uses that could adversely impact the residential nature of the area, and limit the number of

commercial establishments which are not intended primarily for customers who are residents of the area. The special use district has irregular boundaries, generally encompassed by Post and O'Farrell Streets on the north; Polk Street on the west; Golden Gate Avenue on the south; and Jones Street on the east. The district also includes the westerly parts of the blocks fronting on Larkin Street between Turk Street and McAllister Street, near the project site.

The City Planning Commission acknowledged the North of Market Planning Coalition's *Tenderloin 2000 Plan*, found that the plan could be taken into account in City review of development proposals, and that goals and objectives of the *Tenderloin Plan* will be incorporated into a future *North of Market Plan*. The Planning Commission resolution indicates its interest in pursuing further planning in the Tenderloin.[2] Staff resources, however, are not available at present, and no area plan is currently in process.

Future development in the project vicinity includes the Superior and Municipal Courts building of the City and County of San Francisco at McAllister and Polk Streets, approved by the San Francisco City Planning Commission in June 1994. The U.S. General Services Administration is proposing a new Federal Office Building at 10th and Market Streets, about three blocks south of the site. That project would be about 673,000 gross sq. ft. Other potential development in the area includes an approved mixed-use development at 650 Van Ness Avenue. This site is in interim use as a parking lot; the property is currently for sale. At 600 Van Ness Avenue, a mixed-use development that would include elderly housing, a McDonald's restaurant, and associated retail/clinic space is currently undergoing review by the City of San Francisco. The San Francisco Unified School District is considering acquisition of a site for a new elementary school in the area, including the 650 Van Ness Avenue site, or the vacant Hastings "Westblock" site at Larkin and Golden Gate Avenue, across the street from the project site.

The City is currently coordinating seismic strengthening of several buildings in the Civic Center area. The buildings undergoing seismic retrofitting and expected dates for implementation of this work are as follows: Bill Graham Civic Auditorium and Brooks Hall, from May 1994 through late 1995; the Opera House, from early 1996 through mid-1997; the Department of Public Health Building, from mid-1995 through mid-1997; City Hall, from spring 1995 through 1997; Veterans Building, sometime after completion of work at City Hall. Implementation of seismic work at the existing Main Library building has not been scheduled and depends on the occupation of that building by the Asian Arts Museum. As noted above, the New Main Library is scheduled for completion in late 1995.

Other City projects, including reconstruction of Civic Center Plaza according to the 1912 plan and construction of a Fulton Street pedestrian mall between Larkin and Hyde Streets, remain in the long-term planning stages; voters disapproved bond funding for those last two projects in 1992.

PLANS AND POLICIES

State Plans

San Francisco/Oakland State Facilities Plan In 1992, the *San Francisco/Oakland State Facilities Plan* (the Plan) was prepared for the Department of General Services. The Plan provides a guide for management and development of both state-owned and state-leased office facilities in the San Francisco Bay Area. The Plan was prepared in response to damage to three major state-owned office buildings in the San Francisco Bay Area during the 1989 Loma Prieta earthquake. The damaged buildings included the California State Building at 350 McAllister Street and the 525 Golden Gate Avenue building, both in San Francisco, and the 1111 Jackson Street building in Oakland. The state agencies occupying those buildings were relocated to various leased office facilities.

The Plan's goal is to provide consolidated office space in San Francisco that would satisfy the 10-year growth needs of statewide-serving agencies in the Bay Area. The Plan lists several principles in pursuit of that goal:[3]

1. Consolidate the office space of Statewide Agencies in the San Francisco Civic Center.

2. Through consolidation, increase the presence of the State in the Civic Center; enhance the level of service to the public; use existing infrastructure and transportation systems; provide economic support to the local community; and utilize to the greatest extent possible the State's existing real estate assets.

3. Consider the historic value and traditional use of the California State Building in rehabilitation, expansion or replacement of this asset.

City of San Francisco Plans and Zoning

The proposed state project would not be formally subject to City of San Francisco plans and codes. The discussion herein of *San Francisco Master Plan* policies and City Planning Code requirements is presented for informational purposes. However, according to the DGS,

"buildings constructed on State property are exempt from the requirements of local building codes, however local jurisdictions will be given the opportunity to comment on the project. While such comments will be carefully considered, the State is under no obligation to incorporate them."[4]

San Francisco Master Plan

Some key *San Francisco Master Plan* objectives and policies related to the Civic Center and other aspects of the proposed state project include the following:

The Community Facilities Element

- Objective 9, "assure that institutional uses are located in a manner that will enhance their efficient and effective use," and Policy 1, "locate institutional uses according to the Institutional Facilities Plan."

The Recreation and Open Space Element

- Objective 2, to "develop and maintain a diversified and balanced city-wide system of high quality public open space," Policy 3 of that objective is to "preserve sunlight in public open spaces," and Policy 7 is to "acquire additional open space for public use."

The Transportation Element

- Objective 1, Policy 2, to "give priority to public transit as the means of meeting San Francisco's transportation needs, particularly those of commuters," and Policy 5, to "assure expanded mobility for the disadvantaged."

- Objective 2, Policy 6, to "provide incentives for the use of transit, carpools and vanpools, and reduce the need for new or expanded automobile and automobile parking facilities."

- Objective 9, to "provide secure and convenient parking facilities for bicycles," Policy 1, "include facilities for bicycle users in governmental, commercial and residential developments," and Policy 3, to "emphasize security in bicycle parking design."

The Urban Design Element

- Objective 1, "emphasis of the characteristic pattern which gives to the city and its neighborhoods an image, a sense of purpose, and a means of orientation"; Policy 3, to "recognize that buildings, when seen together, produce a total effect that characterizes the city and its districts"; Policy 4, to "protect and promote large-scale landscaping and open space that define districts and topography"; Policy 5, to

"emphasize the special nature of each district through distinctive landscaping and other features"; Policy 6, to "make centers of activity more prominent through design of street features and by other means"; and Policy 7, to "recognize the natural boundaries of districts, and promote connections between districts."

- Objective 2, "conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding"; Policy 4, to "preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development"; Policy 6, to "respect the character of older development nearby in the design of new buildings"; and Policy 7, to "recognize and protect outstanding and unique areas that contribute in an extraordinary degree to San Francisco's visual form and character."

- Objective 3, "moderation of major new development to complement the city pattern, the resources to be conserved and the neighborhood environment"; Policy 1, to "promote harmony in the visual relationships and transitions between new and older buildings"; Policy 2, to "avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance"; Policy 3, to "promote efforts to achieve high quality of design for buildings to be constructed at prominent locations"; and Policy 5, to "relate the height of buildings to important attributes of the city pattern and to the height and character of existing development."

- Objective 4, "improvement of the neighborhood environment to increase personal safety, comfort, pride and opportunity"; Policy 3, to "provide adequate lighting in public areas"; Policy 4, to "design walkways and parking facilities to minimize danger to pedestrians"; Policy 5, to "provide adequate maintenance for public areas"; Policy 6, to "emphasize the importance of local centers providing commercial and government services"; Policy 12, to "install, promote and maintain landscaping in public and private areas"; Policy 13, to "improve pedestrian areas by providing human scale and interest"; and Policy 14, to "remove and obscure distracting and cluttering elements."

The Environmental Protection Element

- Objective 1, Policy 4, to "assure that all new development meets strict environmental quality standards and recognizes human needs."

- Objective 12, to "establish the City and County of San Francisco as a model for energy management."

- Objective 15, to "increase the energy efficiency of transportation and encourage land use patterns and methods of transportation which use less energy," and Policy 3, to "encourage an urban design pattern that will minimize travel requirements among working, shopping, recreation, school and childcare areas."

The Community Safety Element

- Objective 2, to "preserve, consistent with life safety considerations, the architectural character of buildings and structures important to the unique visual image of San Francisco," and Policy 1, to "retain the architectural design character of buildings and structures in the renovation work required for abatement of hazards to life safety."

The Civic Center Area Plan

- Objective 1, to "maintain and reinforce the Civic Center as the symbolic and ceremonial focus of community government and culture"; Policy 1, to "emphasize key public buildings, particularly City Hall, through visually prominent siting"; Policy 2, to "maintain the formal architectural character of the Civic Center"; Policy 3, to "design Civic Center buildings and open spaces to serve as public gathering places for ceremonial, cultural, recreational, and other community activities"; Policy 4, to "provide a sense of identity and cohesiveness through unifying street and Plaza design treatments"; and Policy 5, to "maintain existing streets as vehicular, pedestrian or open space corridors."

- Objective 2, to "develop the Civic Center as a cohesive area for the administrative functions of city, state, and federal government, and as a focal point for cultural, ceremonial, and community activities"; Policy 1, to "design the Civic Center to promote efficiency and convenience within and between the governmental entities represented, and provide for their orderly expansion"; Policy 3, to "encourage governmental activities of each level of government to locate within a 'sphere of influence' within the Civic Center to avoid inefficient dispersal of these activities throughout the area"; and Policy 4, to "encourage administrative-oriented governmental functions (executive, legislative, and judicial) to locate in new consolidated facilities rather than being dispersed throughout the adjacent area in leased or rented quarters."

- Objective 3, to "provide convenient access to and circulation within the Civic Center, and support facilities and services"; Policy 1, to "locate buildings employing large numbers of employees and/or attracting large numbers of visitors in convenient pedestrian proximity to public transit and off-street parking facilities"; and Policy 3, to "provide and price parking for short-term visitor use, and discourage long-term parking. Encourage transit use as the primary means of access to the Civic Center."

The Civic Center Area Plan objectives and policies cited above are part of the plan adopted in 1974. That plan is under review and in June 1994 the San Francisco Department of City Planning published the *Civic Center Study - Administrative Draft for Public Review*.[5] The study reviews existing and previously proposed policies and development goals for the Civic Center and its "ring" neighborhoods: North of Market, Mid-Market, South Van Ness and Hayes Valley neighborhoods. The study proposes short-term strategies to revitalize the area using existing public resources focused on specific geographic areas to create safe and attractive destinations

which will stimulate further long-term private sector investments in these areas. The study proposes the goal to achieve a safe, dynamic and pleasant 24-hour "campus" of the Civic Center and its environs. The study proposes goals, objectives and policies for a revised Civic Center Plan, an element of the *San Francisco Master Plan.* The proposed goals include:

- "Maintain and reinforce the Civic Center as the City's central place for government administration, judicial services, and public gathering and as a center for art and culture. Facilitate the orderly expansion of educational institutions, particularly those related to the arts, law and public policy."

- "Improve the urban environment by increasing safety, maximizing day and nighttime activities and facilitating the sharing of public facilities."

- "Preserve architecturally significant structures and enhance the architectural character of the area through proper design of new buildings, additions to existing buildings, open spaces and streets, and signage."

- "Preserve and enhance view corridors to Civic Center."

- "Maintain sun exposure to public plazas and open spaces and protect these spaces from unpleasant winds."

Proposed Civic Center Plan objectives for Land Use relevant to the state project include:

- "Objective 1; maintain and reinforce the Civic Center as the symbolic and ceremonial focus for the administrative and civil judicial functions of the City, State and Federal Governments, and as a focal point for cultural, ceremonial and political activities."

- "Objective 2; preserve and strengthen the urban form of the Civic Center as the central place of government and major cultural center in San Francisco. Proposed Policy 2 for that objective states: "Promote harmony in building heights in the larger Civic Center area and maintain the predominance of City Hall in the core area."

Objective 3 of the draft plan, for Urban Design, states: "Preserve and enhance the spatial relationships within the Civic Center"; Policy 1 for that objective is "maintain the formal architectural character for the Civic Center with City Hall as the prominent centerpiece." Policy 3 would "ensure that new buildings are compatible with the architectural character of the Civic Center and incorporate major common design elements. Adhere to architectural design guidelines that build on the characteristics of the core Beaux Arts buildings." Policy 4 would "preserve historic Civic Center buildings and restore them in a manner which retains the buildings' established architectural style and contribution to the Beaux Arts composition of the Civic Center complex while insuring flexibility for adaptive reuse. Apply nationally and locally

established standards for the treatment of historic properties in alterations of and additions to these buildings."

Objective 4 for Open Space and Streetscape Treatments would "maintain streets and public open spaces within the Civic Center for the use and enjoyment of the public and to emphasize the center's monumental architecture." Policy 10 would "maximize sun exposure to public places and open spaces and protect these spaces from unpleasant winds."

In addition to proposed Master Plan language, the study reviews governmental office needs and development activities, including the state project, cultural facilities, educational facilities, urban design resources, public gathering spaces, and housing.

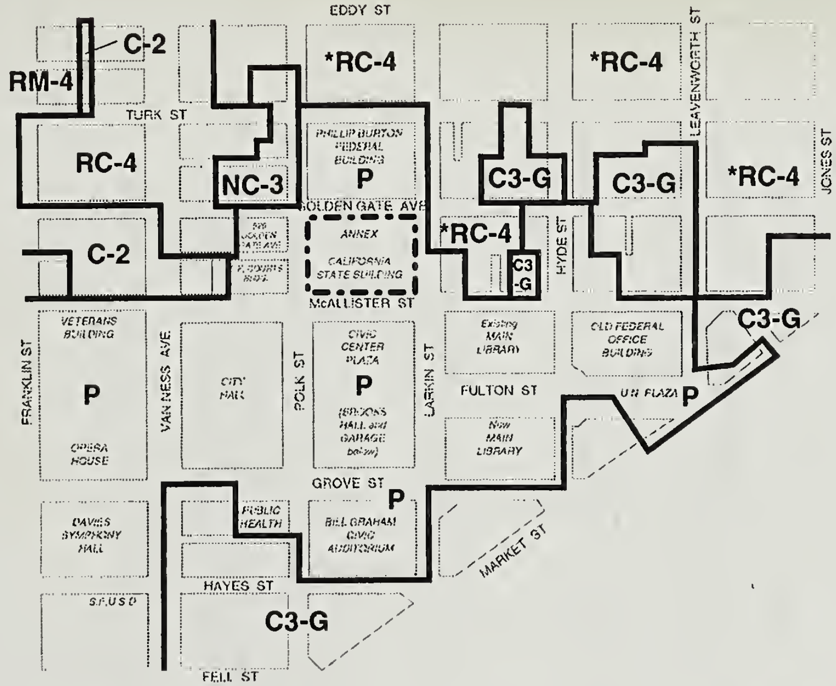
Van Ness Area Plan

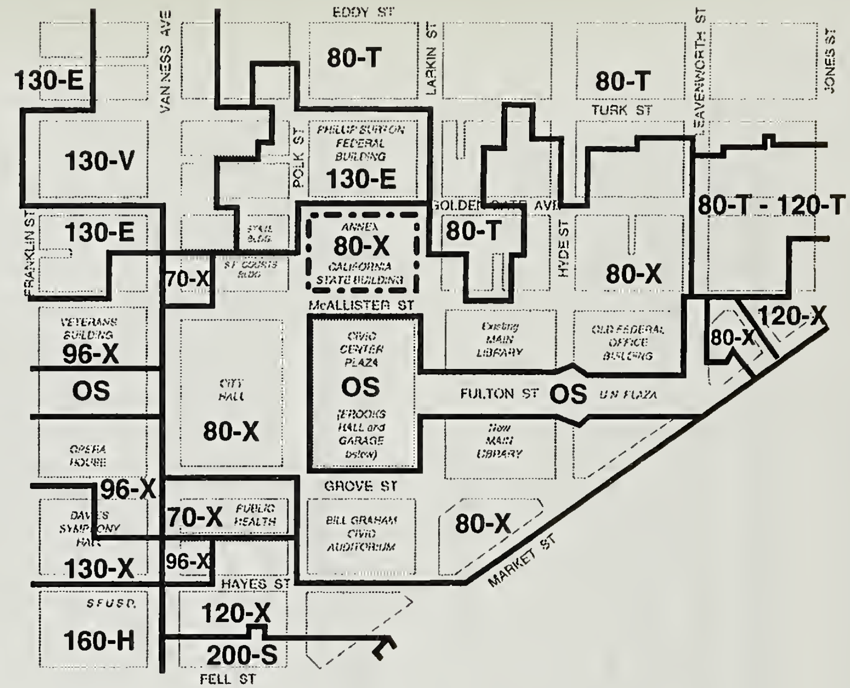
The *Van Ness Area Plan* of the *San Francisco Master Plan* covers areas along Van Ness Avenue, from Redwood Street to Bay Street. The Plan seeks to create a new residential neighborhood, permit development of commercial uses to serve the new residential uses, conserve existing housing uses along this corridor, preserve architectural resources in the corridor, and provide height limit and other design controls.

<u>Zoning</u>

The project site is in a P (Public) Use District in the San Francisco City Planning Code. Permitted uses under the City Planning Code (Sec. 234.1) include structures and uses of governmental agencies not subject to the City Planning Code and public structures and uses of the City and County of San Francisco and other government agencies subject to the City Planning Code when in conformity with the *San Francisco Master Plan.* Under this zoning designation, the proposed project would be a principal permitted use. The entire site is within a 80-X Height and Bulk District (80-ft. height limit, no bulk limit). Figure 17 shows existing City of San Francisco zoning and height and bulk districts in the project area.

There is no Floor-Area Ratio (FAR) limit in a P District. The project site borders a RC-4 (Residential Commercial Combined, High Density) District to the east and a NC-3 (Moderate-Scale Neighborhood Commercial) District to the northwest. The North of Market Residential Special Use District, Section 249.5 of the City Planning Code, is an overlay zone in this RC-4 area that implements policies intended to protect and enhance low- and moderate-cost housing





ZONING

RC-4	Residential-Commercial (High Density)
RM-4	Mixed House and Apartment
NC-3	Moderate-Scale Neighborhood Commercial
C-2	Community Business
C3-G	Downtown General Commercial
P	Public Use
*	North of Market Residential S.U.D.

- - - Project Site

0 800
Feet

HEIGHT AND BULK

E	Maximum plan dimensions apply above 65 feet
G	Maximum plan dimensions apply above 80 feet
H	Maximum plan dimensions apply above 100 feet
S	Mandatory volume reduction at upper floors
T	Setback may be required above 80 feet or less (North of Market residential SUD)
V	May be required above 50 feet (Van Ness SUD)
X	Bulk limits not applicable
OS	Bulk limits determined by consulting Master Plan

Numbers are height limits in feet. Letter symbols refer to bulk limits. Suffix numbers identify distrcits in which special regulations apply.

SOURCE: Environmental Science Associaters

Figure 17
Zoning and Height & Bulk Districts in the Project Area

resources, to limit commercial and hotel development that could adversely affect residential uses, and to preserve architectural resources and existing scale of development. Generally, the areas to the north, south and immediately west of the project site are zoned P and contain other public uses, including the Federal Building to the north, the Courts Building (approved for construction) to the west, and Civic Center Plaza to the south. Areas immediately adjacent to the P District are zoned C-2 (Community Business) District and NC-3 District to the west, and C-3-G (Downtown General Commercial) District to the south and east.

For projects under City jurisdiction, the City Planning Code, which incorporates by reference the City Zoning Maps, governs permitted uses, densities and configuration of buildings within San Francisco. Permits to construct new buildings or to alter or demolish existing ones may not be issued unless the proposed project conforms to the Code or an exception is granted pursuant to provisions of the Code. The State is not subject to City building permit authority.

City Planning Code Section 101.1 contains general priority policies, added in a 1986 voter initiative (Proposition M) that also implements office space development limits for projects under City jurisdiction. These policies are preservation and enhancement of neighborhood-serving retail uses; protection of neighborhood character; preservation and enhancement of affordable housing; discouragement of commuter automobiles; protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; earthquake preparedness; landmark and historic building preservation; and protection of open space. Prior to issuing a permit for any project under City jurisdiction which requires an Initial Study under CEQA or adopting any zoning ordinance or development agreement, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. The state project would not be subject to that process.

IMPACTS AND MITIGATION

Significance Criteria

The project would have a significant environmental effect on land use if it were substantially to disrupt or divide the existing land uses, or substantially change proposed land uses, in the Civic Center area.

The project would have a significant environmental effect if it were substantially non-responsive to adopted *San Francisco Master Plan* or City Planning Code environmental-related policies, objectives or requirements; or were substantially inconsistent with state planning goals applicable to the project, including the *San Francisco/Oakland Facilities Plan.*

<u>Impacts</u>

Land Use

Impact A.1: The project would retain and expand existing public uses in the Civic Center; it would not change existing uses on the site or nearby areas. (Not Significant)

The proposed project would consolidate state office space in the San Francisco Civic Center by renovating the existing California State Building and replacing the existing Annex with an 845,000-gross-sq.-ft. New State Office Building. The project would result in a net increase of 460,000-gross-sq.-ft. of office space and 1,575 office workers for the site.

The project would conform with the existing land uses on the site and would have a similar character to that of the surrounding public uses, and the project would not disrupt or divide the neighborhood. Therefore, land use effects of the project would not be significant.

Policy Conformity

Impact A.2: The project would be consistent with state goals and policies for office facilities in San Francisco. (Not Significant)

The project would conform with the objectives of the *San Francisco / Oakland State Facilities Plan* in that it would:

- Ensure the continued presence of judicial and other state uses that have been located in the Civic Center for over 100 years;
- House approximately 2,500 state office workers, providing economic benefits to the businesses located in and around the area;
- Consolidate state agencies that are compatible with each other and do not require special facilities, and whose clientele would not disrupt other agencies;
- House 2,500 employees in a facility that is centrally-located and easily accessible by public transportation;

- Reuse and renovate the historic California State Building for its traditional State Courts functions;

- Make use of two state-owned buildings on the site. Any other centrally-located single site that would accommodate the space program would need to be purchased or leased.

In the analysis and findings of the *Facilities Plan*, the proposed project would be the most timely and cost-effective of the alternatives considered, compared to use of combination of the other state-owned property or leased space (see Chapter IV, Alternatives Analysis).

Impact A.3: The project would generally respond to major *San Francisco Master Plan* policies applicable to the project. (Not Significant)

The project would generally respond to *City of San Francisco Master Plan* policies, including the Community Facilities, Recreation and Open Space, Transportation, Urban Design, Environmental Protection, Community Safety, and the Civic Center Area Plans of the *San Francisco Master Plan*:

- In relation to the Community Facilities Element, the project would maintain public uses in the San Francisco Civic Center. The project would meet current air quality and noise standards; would be accessible to public transportation; and would provide on-site child-care (see Section H., Noise; Section K., Air Quality; Section F., Traffic, Transit, Parking and Circulation; and the Initial Study, Appendix A, concerning other community services).

- In relation to the Recreation and Open Space Element, the project would not directly create or remove public open space. The project would not create new shadow on Civic Center Plaza. The project would add new shade to the Phillip Burton Federal Building plaza; that open space is not under the jurisdiction of the City of San Francisco (see Section C., Solar Access and Shading).

- In relation to the Transportation Element, the project would be accessible to public transit serving all areas of San Francisco and the region; the project would have limited parking, provide appropriate bicycle parking, and would include a state-sponsored carpool and vanpool program, and would include showers for employees using alternative modes of transit (see Section F., Traffic, Transit, Parking and Circulation).

- In relation to the Urban Design Element, the project would preserve and renovate the historic California State Building. The 209-ft.-high New State Office Building would be larger in scale than older buildings in the Civic Center, with massing and setbacks intended to provide a transition between the older buildings of the Civic Center and the 300-ft.-high Federal Building to the north. The project would provide landscaping, lighting and pedestrian scale elements, including street-tree plantings, a canopied recessed entrance arcade on Golden Gate Avenue, landscaped terraces near the Larkin and Polk Street wings

of the California State Building, and street-level lighting (see Section B., Visual and Design Factors).

- In relation to Community Safety Element policies for preservation of architectural resources consistent with life safety consideration, the project would renovate the historic California State Building, including seismic reinforcement to current standards. (Section E., Cultural Resources, discusses potential significant effects on the interior architectural elements of the California State Building resulting from the proposed shear-wall structural system.)

- In relation to the revised Civic Center Plan now under public review, the project would continue and expand public and governmental uses in the Civic Center, and would maintain the architectural and urban design character of the California State Building as part of the Beaux-Arts Civic Center. The New State Office Building, at 209 ft., would be greater in height than existing buildings in the Civic Center core (see Section B., Visual and Design Factors), and the project would have shadow and wind effects on open spaces (see Section C., Solar Access and Shading, and Section D., Wind).

Impact A.4: The project would be consistent with San Francisco City Planning Code Public (P) Use District Designation. (Not Significant)

The proposed project, as a continuation and expansion of state uses on the project site, would be consistent with the Public Use District designation of the site in the San Francisco City Planning Code.

Impact A.5: The project, at 209 ft. in height, would not be consistent with San Francisco City Planning Code Height and Bulk limits for the site of 80 ft. (Not Significant)

The New State Office Building would exceed the existing 80-ft. height limit for the site in the San Francisco City Planning Code, with major elements of the new building rising to 140 ft. at the north side of the 80-ft.-high California State Building to 209 ft. in height at Golden Gate Avenue. Overall, the New State Office Building would be greater in height than the 80-ft.-tall pattern of older public buildings in the Civic Center core. The City Hall dome rises to about 300 ft. The New State Office Building would be 160 ft. to about 90 ft. shorter than the Philip Burton Federal Building across Golden Gate Avenue to the north. Exceeding the height limit would not in itself be considered a physical environmental impact and would not be a significant effect. However, by exceeding height limits, the project might have potential visual, shading and wind impacts. These impacts are discussed in this EIR in Sections B., Visual and Design; C., Solar Access and Shading; and D., Wind, including relationships to applicable City Planning Code criteria.

The proposed *Civic Center Area Plan*, discussed above, states that height limits for the site would be proposed to be revised to reflect the state project. That height limit would be incorporated in the City Planning Code after adoption of the *Civic Center Plan,* if approved in that form by City decision-makers.

Mitigation

No significant adverse effects for Land Use Compatibility or Policy Conformity were identified. Therefore, no mitigation measures are proposed.

NOTES - Land Use and Zoning

1 North of Market Planning Coalition, Final Report - *Tenderloin 2000 Survey and Plan*, July 1992

2 San Francisco City Planning Commission Resolution No. 13586, October 7, 1993.

3 Department of General Services, *San Francisco / Oakland State Facilities Plan,* May 1992.

4 California Department of General Services, Office of Project Development and Management, *San Francisco Civic Center Complex, Design Guidelines*, Volume 11, p. 6.

5 San Francisco Department of City Planning, *Civic Center Study - Comprehensive Plan and Development Progress for: Civic Center, Mid Market Street; South Van Ness; Hayes Valley and North of Market Area of the City, Administrative Draft for Public Review*, June 1994.

B. VISUAL AND DESIGN FACTORS

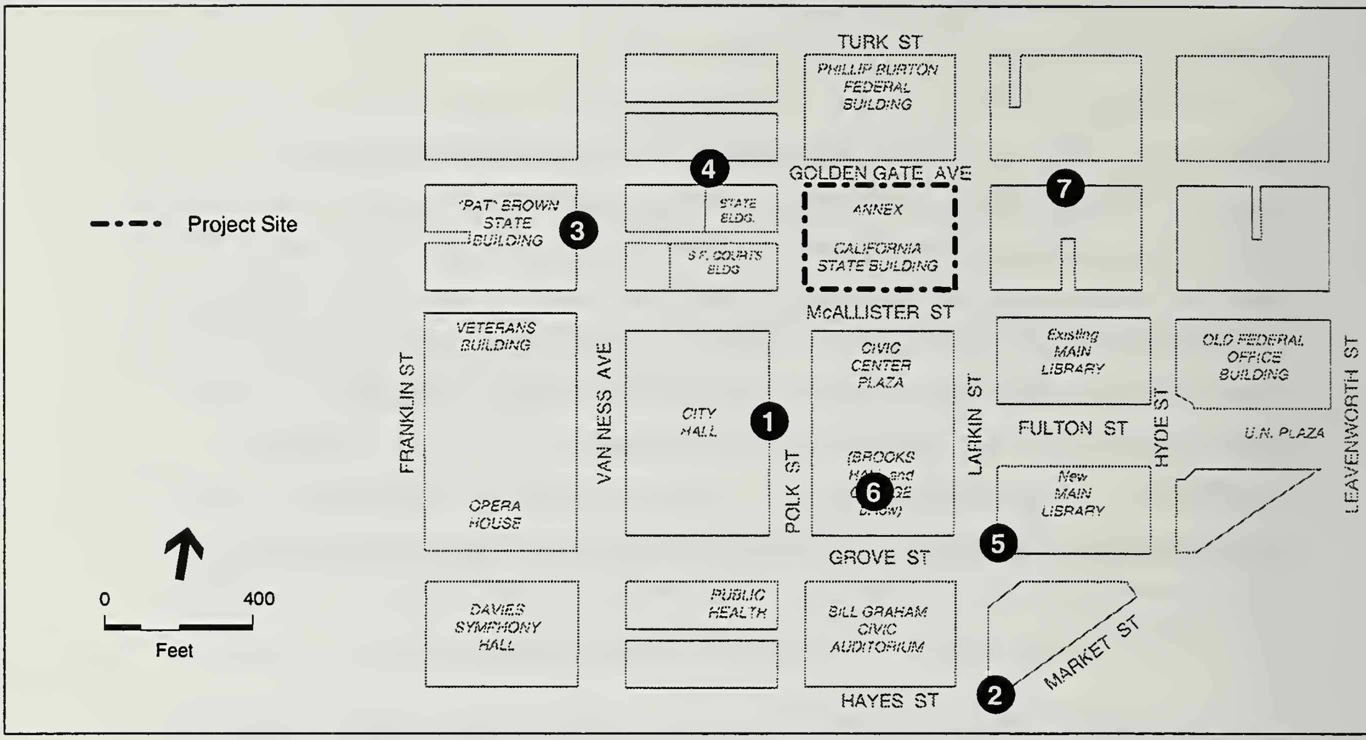
SETTING

The project site includes two connected buildings: the California State Building at 350 McAllister Street occupies the southerly half of the project block, and the Annex at 455 Golden Gate Avenue occupies the northerly half. The State Building, a six-story, approximately 80-ft.-tall steel-frame building clad in white California granite and terra cotta, was completed in 1922. Its Beaux Arts design is consistent with other major buildings in the Civic Center. The Annex is a seven-story, concrete-frame building clad with a variety of materials, including granite, ceramic tile, stucco and metal panels. Completed in 1957, the Annex design is a simplified modern style building. The Annex would be demolished for the project; the State Building would be renovated. Full descriptions of the two structures are provided in Section III.E, Cultural Resources, pp. 86 to 99. Views of the project site are shown in this section, on pp. 48, 49, 54, 56 and 58. Figure 18 identifies the location of those views.

The project site is in the San Francisco Civic Center, which includes a collection of monumental public buildings reflecting the Beaux Arts-inspired City Beautiful movement. A number of newer office structures, ranging up to 29 stories in height, are located in the surrounding area. The tallest nearby building is the California State Automobile Association tower (29 stories) at Van Ness Avenue and Fell Street, five blocks southwest of the site. The Civic Center area and its buildings are also described in Section III.E., Cultural Resources, pp. 80 to 86.

Other tall structures in the area include the Hastings College of the Law dormitory (27 stories) at 100 McAllister Street; the Phillip Burton Federal Building (20 stories, 450 Golden Gate Avenue) directly north of the project site; the 13-story mixed office and residential Opera Plaza at Van Ness and Golden Gate Avenues; the 29-story mixed office and residential Fox Plaza at Market, Hayes and Polk Streets; the 29-story California State Automobile Association tower mentioned above (100 Van Ness Avenue); the 24-story Bank of America Data Center building at Market and Eleventh Streets; the 16-story State Compensation Insurance Fund building at Market and Ninth Streets; and the 12-story 1145 Market Street and 11-story 1155 Market Street office buildings, between Seventh and Eighth Streets.

Civic Center Plaza occupies a double block immediately south of the project site. It is bounded by McAllister, Larkin, Grove, and Polk Streets. The plaza includes a rectangular fountain that extends nearly from Polk to Larkin Streets on a line perpendicular to City Hall. Rows of



1 **Figure 19a** - View of Site Looking Northeast from City Hall Steps at Polk Street

2 **Figure 19b** - View of Site Looking North from Larkin Street Near Hayes Streets

3 **Figure 20a** - View of Site Looking East from Van Ness Avenue Near Redwood Street

4 **Figure 20b** - View of Site Looking East from Golden Gate Avenue West of Polk Street

5 **Figure 21** - View of Site Looking Northwest Across Civic Center Plaza

6 **Figure 23** - View of Site Looking North from Civic Center Plaza

7 **Figure 25** - View of Site Looking West from Golden Gate Avenue Near Larkin Street

SOURCE: Environmental Science Associates

Figure 18
Viewpoint Locations

flagpoles and pollarded sycamore trees line the fountain, and there are square lawns on the north and south sides of the fountain. Groups of olive trees flank the lawns to the east and west. The Civic Center Tot Lot, completed in March 1994, occupies the northeast corner of the plaza.

The plaza is visually bounded by major public buildings, including City Hall on the west; Bill Graham Civic Auditorium on the south; the new Main Library (under construction) and the old Main Library on the east; and the California State Building on the project site, on the north. Although it does not front the plaza itself, the 20-story Phillip Burton Federal Building at 450 Golden Gate Avenue is prominently visible in views of the Civic Center. It rises without setbacks to 315 ft., compared to the typical 80-ft. height of older Beaux Arts-style Civic Center buildings. (See Figure 19.a). (For comparison, the City Hall dome is about 300 ft. high, including an 80-ft. base.)

All these buildings are visible from the plaza and from the streets and sidewalks immediately surrounding the plaza itself. Because the Annex is similar in height and to the north of the California State Building, that part of the project site is not visible from the Civic Center Plaza to the south. The California State Building is also visible from streets and sidewalks in the vicinity, including Polk and Larkin Streets from as far south as Market Street, and from McAllister Street to the east and west.

Views of the California State Building from McAllister Street west of Polk will be partially obscured by the San Francisco Courts Building, approved in June 1994 for construction at the northwest corner of the McAllister-Polk intersection. From Civic Center Plaza, and other points south of the project site such as Market at Polk or at Larkin Streets, the 20-story Federal Building rises above the six-story California State Building, and forms a major background to many views of the State Building. (See Figures 19.a, 19.b. p. 48 and Figure 21, p. 54.)

The east and west facades of the Annex are visible from Larkin near McAllister Street, and from Polk near McAllister, respectively. Partial views of the Annex are available from Polk Street and Larkin Street, north of Golden Gate Avenue, or from Van Ness Avenue (see Figure 20.a). The main north facade of the Annex is visible from Golden Gate Avenue, generally between Van Ness Avenue and Hyde Street (see Figure 20.b). A full view of that frontage is visible from locations in the plaza on the south side of the Federal Building, directly north of Golden Gate Avenue.

State Building

a. View of Site Looking Northeast from City Hall Steps at Polk Street

State Building

b. View of Site Looking North from Larkin Street Near Hayes Street

SOURCE: VIZability (Top Photo)
San Francisco Department of City Planning (Bottom Photo)

Figure 19
Views of Site

a. View of Site Looking East from Van Ness Avenue Near Redwood Street

b. View of Site Looking East from Golden Gate Avenue West of Polk Street

SOURCE: VIZability

Figure 20
Views of Site

United Nations Plaza extends to the east from Larkin Street to Market Street, occupying the former right-of-way of Fulton Street. This brick-paved plaza is framed on the north by the old Federal Building and on the south by the Orpheum Theater and a triangular structure at One United Nations Plaza. The view west through United Nations Plaza frames City Hall between the Old Federal Office Building and the Orpheum Theater. The project site is not generally visible from United Nations Plaza, because of the intervening old Main Library building.

As part of the new Main Library project, the Pioneer Monument statuary group was moved to the center of Fulton Street between Larkin and Hyde; a proposal to convert this block of Fulton Street to a pedestrian mall remains in the long-term planning stages; voters disapproved bond funding for that project. After completion of the library, the block will have limited vehicle and parking access, but will not be fully developed open space. The California State Building is visible from the westerly portion of this block of Fulton Street.

The differently oriented South and North of Market street grids meet at Market Street. Civic Center views are available along Market Street in the project vicinity. These include views of City Hall and of the old State Building from the Market, Larkin and Hayes Streets intersection (see Figure 19b, p. 48). The tops of the existing state buildings are visible in the long-range view from Twin Peaks as part of the complex of monumental structures that make up the Civic Center. From this view, the base of the building is partially obscured by the view of City Hall.

From the site along McAllister Street there are views of City Hall and other public buildings across Civic Center Plaza. Long-range views are blocked in other directions by intervening structures, although several taller buildings in the area are visible to the north, west and south. Downtown highrises are visible in longer views to the east and northeast. When the California State Building was occupied, prior to the 1989 earthquake, views from upper floor windows were primarily from staff areas, rather than public areas. Other windows in the California State Building face Polk or Larkin Streets, or interior light wells on the north side of the building and have limited long-range views. Views from windows in upper floors of the Annex also serve staff, rather than public, areas. These have views of the Federal Building and its plaza to the north, and other nearby buildings north of the Civic Center.

IMPACTS AND MITIGATION

Significance Criteria

The project would be considered to have significant effects if it would be substantially incompatible in scale, massing, facade patterns or materials with existing development; would substantially block public views of the Bay, hills, other public open space, or architectural landmarks from publicly accessible viewpoints; or would cause glare that could create a safety hazard for motorists.

It should be noted that judgments of compatibility in scale, massing and other design factors are, to some extent, subjective. The impacts discussed below are therefore presented in a descriptive manner, with brief conclusions of significance on the basis of these criteria.

Impacts

Impact B.1: The proposed project would change views of the site, replacing the seven-story, 80-ft. Annex, with the New State Office Building, ranging up to 16 stories and 209 ft. in height. The project would retain and renovate the California State Building. (Not Significant)

The project would include demolition of the seven-story Annex at 455 Golden Gate Avenue. The California State Building would be renovated, integrated with the New State Office Building and its exterior facade would be restored. The New State Office Building would replace the 80-ft.-tall Annex; the new building would range in height from 140 ft. at the north side of the California State Building to 209 ft. at Golden Gate Avenue. The New State Office Building would consist of a series of elements with varying heights and setbacks, intended to complement, with a contemporary design, the existing materials and character of older, Beaux Arts-style Civic Center buildings, including the California State Building. The design is intended to taper down the new building mass from the north, near the 300-ft.-tall Federal Building north of Golden Gate Avenue, to the south at the 80-ft.-tall California State Building and other buildings of the Civic Center. The setback and massing are intended to respect the scale of the San Francisco Civic Center and the importance of the City Hall and its dome as a main architectural feature of the Civic Center. The project would meet the state's design guidelines that the new building not penetrate a plane defined by the cornice of the Phillip Burton Federal Building and descending to the center of Civic Center Plaza. The exterior cladding of the New State Office

Building would be white granite, similar to that used in the California State Building and other older Civic Center structures.

Viewed from the south, from locations around or in Civic Center Plaza, the New State Office Building would be visible to the north of, and above, the California State Building (see Figures 22 and 24, pp. 55 and 57). The new building would be seen as a series of stepped-back elements with closely-spaced windows, generally in horizontal groups of three set off by vertical architectural elements.

Horizontal elements of the south facade of the New State Office Building would include a belt course above the tenth floor windows, and a trellis-like canopy above the 13th floor. In comparison, the McAllister Street facade of the California State Building is characterized by a pattern of large and small window openings, including alternating two-story arched, inset windows at the fourth and fifth floors. A belt course would be above the fifth floor windows (see Figure 24, p. 57). In many locations in the Civic Center Plaza, the New State Office Building would replace views of the uniform vertical facade of the Phillip Burton Federal Building with views of the setback elements of the new building (see Figures 22 and 24, pp. 55 and 57). The new building would include a curved facade, visible primarily between the 12th and 14th floors. At the 15th floor, a setback would be visible on either side of the building core penthouse. That setback would include a terrace open to building employees.

External changes to the California State Building would include repair of surface materials, repair or replacement of architectural details, such as flagpoles near the main McAllister Street entrance, and replacement of the roof materials with slate shingles, as originally specified. The California State Building would remain as a Beaux Arts-style structure, framing the north side of Civic Center Plaza, and continue to be part of the group of major public buildings facing the plaza.

In views from Civic Center Plaza toward the state site and City Hall, City Hall and its 300-ft. dome would remain as a major visual landmark. The varied massing of the up-to-209 ft. New State Office Building would replace views of the 300-ft. Federal Building to the north (see Figures 21 to 24, pp. 54 to 57). The varied fenestration and granite cladding proposed for the New State Office Building would be a contemporary addition to Civic Center that would reflect existing materials of City Hall and other older buildings.

The east (Larkin Street) and west (Polk Street) facade of the New State Office Building would be similar, with four major masses stepping up from south to north. The glazing of the atria would be visible from those two streets (see Figure 26, p. 59). The east and west facades would also have varied setbacks at the property line, with the southerly element set back the same distance as the north wing of the California State Building; the highest element at Golden Gate Avenue would extend to the property line. Along Golden Gate Avenue, the New State Office Building would replace the seven-story Annex with a 16-story element. Seen from Golden Gate Avenue, that facade would include a 22-ft.-wide canopy 50 ft. above the sidewalk, and a light well at the center of the upper floors would be designed to reflect light onto this north facade. Between the 3rd and 14th floor, and about 30 ft. in from Larkin and Polk Streets, the north facade would be extended out about two ft. beyond the property line, with a pattern of larger window openings. The vertical north facade of the New State Office Building would be visible in views from Golden Gate Avenue from the west, with views of the vertical facades of the Phillip Burton Federal Building and the vacant 525 Golden Gate Avenue State building.

One block or more from the Civic Center, such as Market near Hayes Street or near Polk Street, the New State Office Building would be visible above the California State Building, partially blocking existing views of the Federal Building.

Employees and visitors in the project would have views of the Civic Center, both from the California State Building, and from the New State Office Building above the sixth floor, and from the terraces on the 15th and 16th floors. The New State Office Building would block views of the Civic Center now available from the south side uses in the Federal Building, below approximately its 15th floor. The new building would block some long-range views to the south from a 10th floor public snack bar in the Federal Building.

From long-range views of the Civic Center, such as Twin Peaks, the New State Office Building would be visible as a new, higher element near the California State Building, of lesser height than the Federal Building to the north.

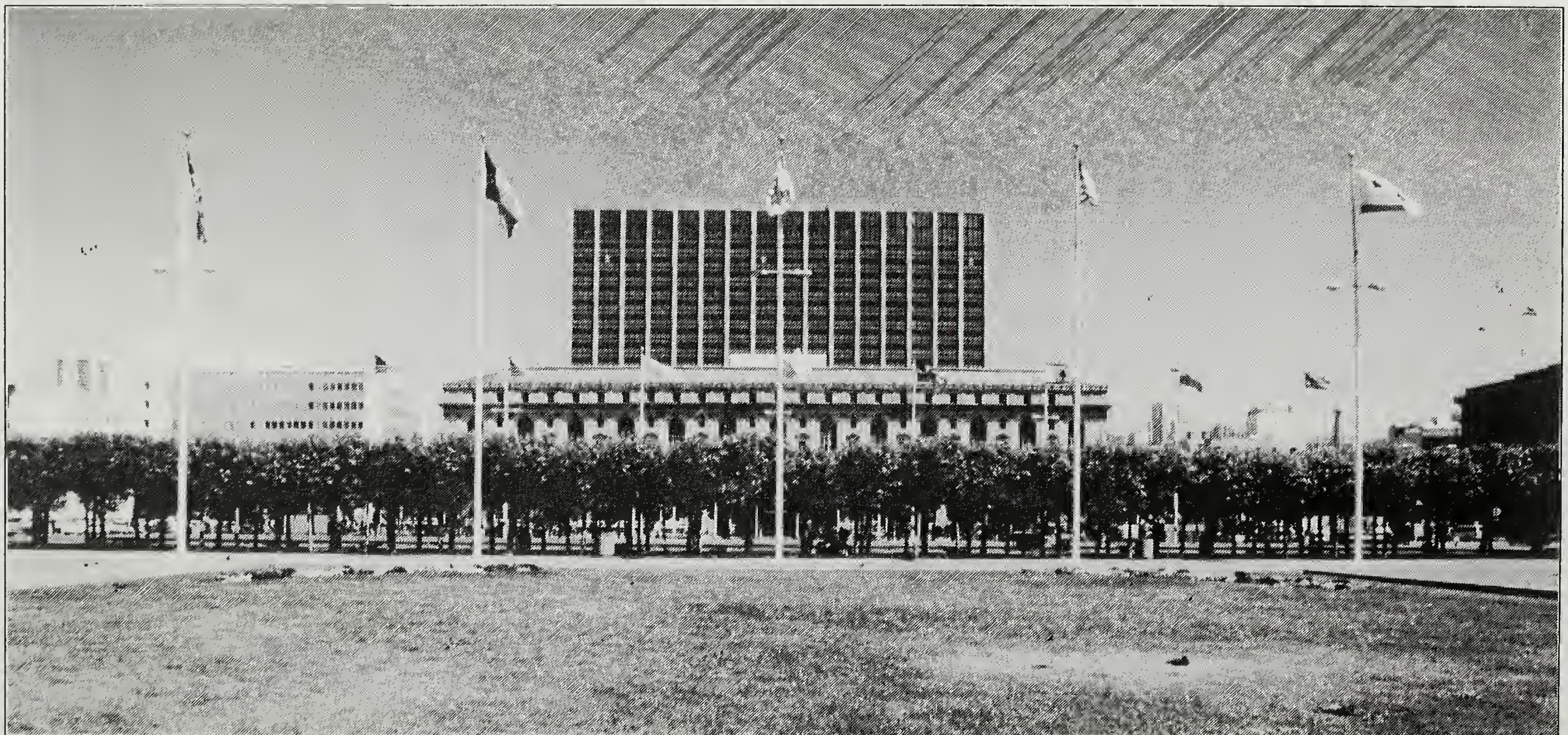
Overall, the project would retain the California State Building and add a new 209-ft.-tall (at its highest point) visual element to the north side of the Civic Center, transitional in scale and massing between the 80-ft. California State Building, other major Civic Center buildings, and the 300-ft. Federal Building. The New State Office Building would use materials similar to existing older buildings, in a contemporary design. The project would not block existing public views of

SOURCE: VIZability

Figure 21
View of Site Looking Northwest
Across Civic Center Plaza

SOURCE: VIZability

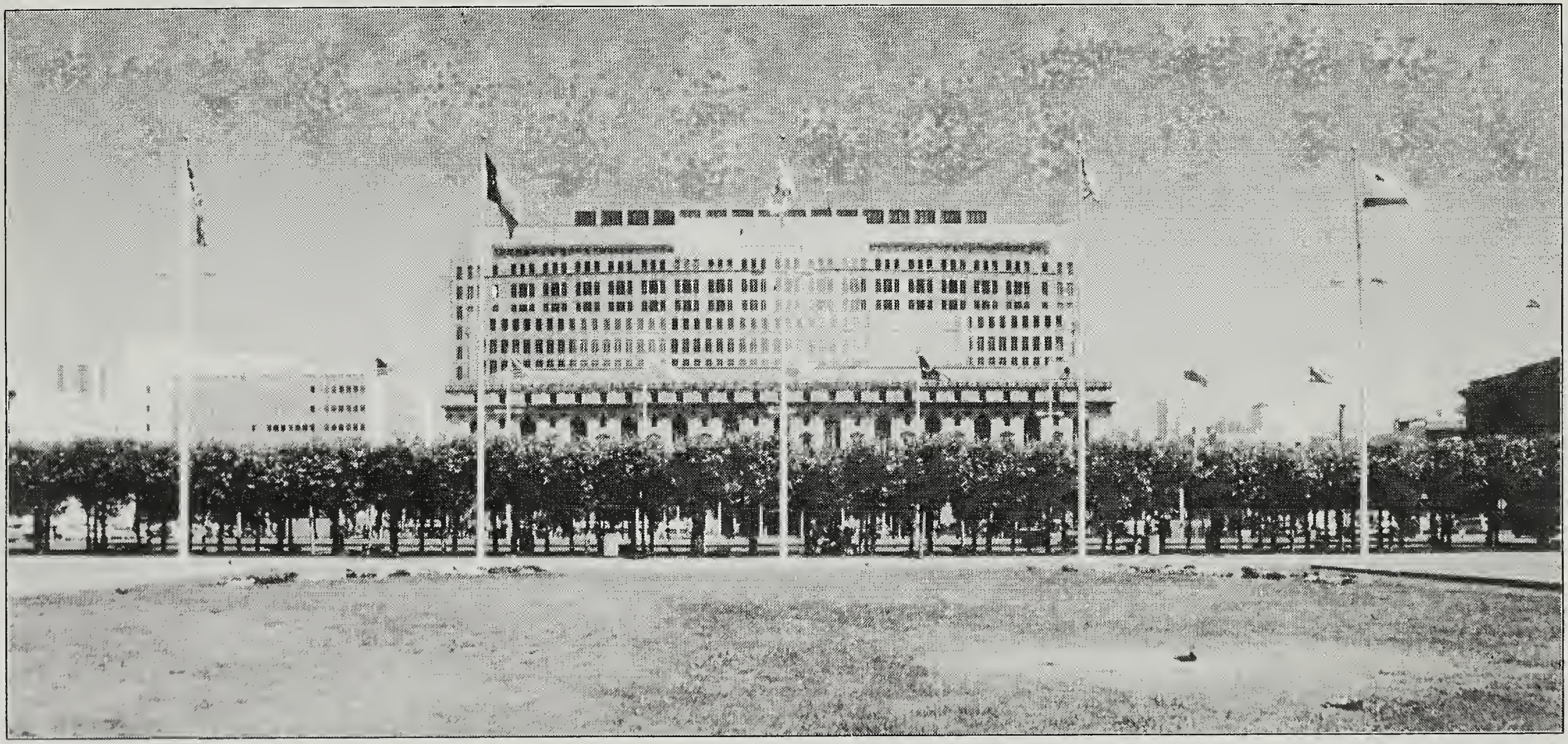
Figure 22
Photomontage: View Northwest Across Civic Center Plaza



SOURCE: VIZability

State Office Building EIR ■

Figure 23
View of Site Looking North
From Civic Center Plaza



SOURCE: VIZability

Figure 24
Photomontage: View of Site Looking North
From Civic Center Plaza

SOURCE: VIZability

Figure 25
Photomontage: View of Site Looking West From
Golden Gate Avenue Near Larkin Street

SOURCE: VIZability

Figure 26
View of Site Looking West From
Golden Gate Avenue Near Larkin Street

the Bay, hills, or other public open space, or public views of architectural resources in the Civic Center. The project would maintain the California State Building as the architectural element directly facing the north side of Civic Center Plaza, and would not directly change the urban design characteristics of the Beaux Arts-style buildings of the Civic Center core. Maintenance of that character would respond to adopted or proposed *City of San Francisco Master Plan* policies for urban design in the Civic Center, and be consistent with the area's designation as a National Register Landmark District, National Register Historic District, and a local Civic Center Historic District (see Section III.A., Land Use Compatibility and Policy Conformity, and Section III.E., Cultural Resources). Therefore, the project would not have a significant adverse effect on scale of development, views, or the visual character of the Civic Center.

Impact B.2. The project would not cause glare effects that would be hazardous to motorists. (Not Significant)

The New State Office Building would not use highly reflective glass in windows, atria glazing, or the upper floor light-well feature on the Golden Gate Avenue facade. Glare effects that could affect motorists' vision would be more likely to occur in mornings or late afternoons, when the sun was at low angles above the horizon, in an east (morning) or west (afternoon) direction. Sunlight reflected from the windows or atria glazing on the Larkin Street or Polk Street frontage could be reflected directly back at motorists on Golden Gate Avenue. As Golden Gate Avenue is one-way eastbound, that effect would be limited to late afternoons. Because the project would include non-reflective glass, would have a non-polished granite facade with a varied fenestration pattern and setbacks on the Larkin Street side, glare effects would not be hazardous. In addition, the existing 525 Golden Gate Avenue building would block views of west facade, and potential glare, for motorists approaching from the west.

<u>Mitigation</u>

No significant adverse effects for visual and design factors were identified. Therefore, no mitigation measures are identified.

C. SOLAR ACCESS AND SHADING

SETTING

Public open space in the project vicinity, existing and zoned, as shown in Existing Land Use and San Francisco City Planning Code zoning maps (see Figures 16 and 17, pp. 30 and 39) includes Civic Center Plaza, across McAllister Street to the south of the project site; Fulton Street between Civic Center Plaza and Hyde Street, formerly proposed as a Fulton Street Mall and now used for parking and circulation[1] and United Nations Plaza, which extends from Hyde Street to Market Street generally in the Fulton Street right-of-way and includes Leavenworth Street between Fulton and McAllister Streets. The open space in front of the Phillip Burton Federal Building on Golden Gate Avenue between Polk and Larkin Streets, north of the project site, while not designated open space, has functioned as a plaza (it is currently used for construction staging for asbestos remediation and other renovation of the Federal Building). In the project vicinity, Civic Center Plaza is the only park under the jurisdiction of the San Francisco Recreation and Park Department and thus protected by the Sunlight Ordinance (Section 295 of the City Planning Code). The project site includes the California State Building and Annex; there is no designated open space on the site. The State Building includes a landscaped setback along its McAllister Street, Polk Street and Larkin Street frontages.

Shadow patterns for existing buildings in the project area (including the two existing buildings on the project site) and for the proposed project are shown for 10:00 a.m., noon and 3:00 p.m. for three seasons: during winter and summer solstices, when the sun is at its lowest and highest, and during the spring equinox, when the sun is at its midpoint (see Figures 27 through 29, pp. 63 to 65). Conditions from June 21 through December 21 mirror the conditions from December 21 through June 21 (using solar time). Conditions on the fall equinox, around September 21, would be similar to those on the spring equinox, around March 21. September 21 time would be Pacific Daylight Time, advanced one hour from Pacific Standard Time in March. The analysis includes shadows cast on streets, sidewalks, pedestrian areas, and open spaces in the area potentially affected by the proposed project. Figures 27 through 29 show existing building shadow and net new shadow due to the project. The figures illustrate building locations and property lines; sidewalks would be beyond those frontages. The existing buildings on the site do not shade open space under the jurisdiction of the City of San Francisco Recreation and Park Commission at any time. The Annex shades the Federal Building plaza in midday hours in fall, winter and spring. In December, when shadows are longest, the Annex shadows all of that open space before and after noon; at 12 noon, the Annex shades about 80 percent of the plaza.

IMPACTS AND MITIGATION

Significance Criteria

Because of San Francisco's generally mild climate, public use of open space is considered to be encouraged by availability of direct sunlight. *San Francisco Master Plan* and City Planning Code policies and requirements call for maintenance of sun access to public open space. City Planning Code Section 295, discussed further below, generally prohibits new building that would cause significant new shadows on open space under the jurisdiction of the San Francisco Recreation and Park Commission. (Section 295 would not apply to the project, under State jurisdiction.) A project would have significant effects if new shadows on public open space were to substantially, adversely affect public use of that space.

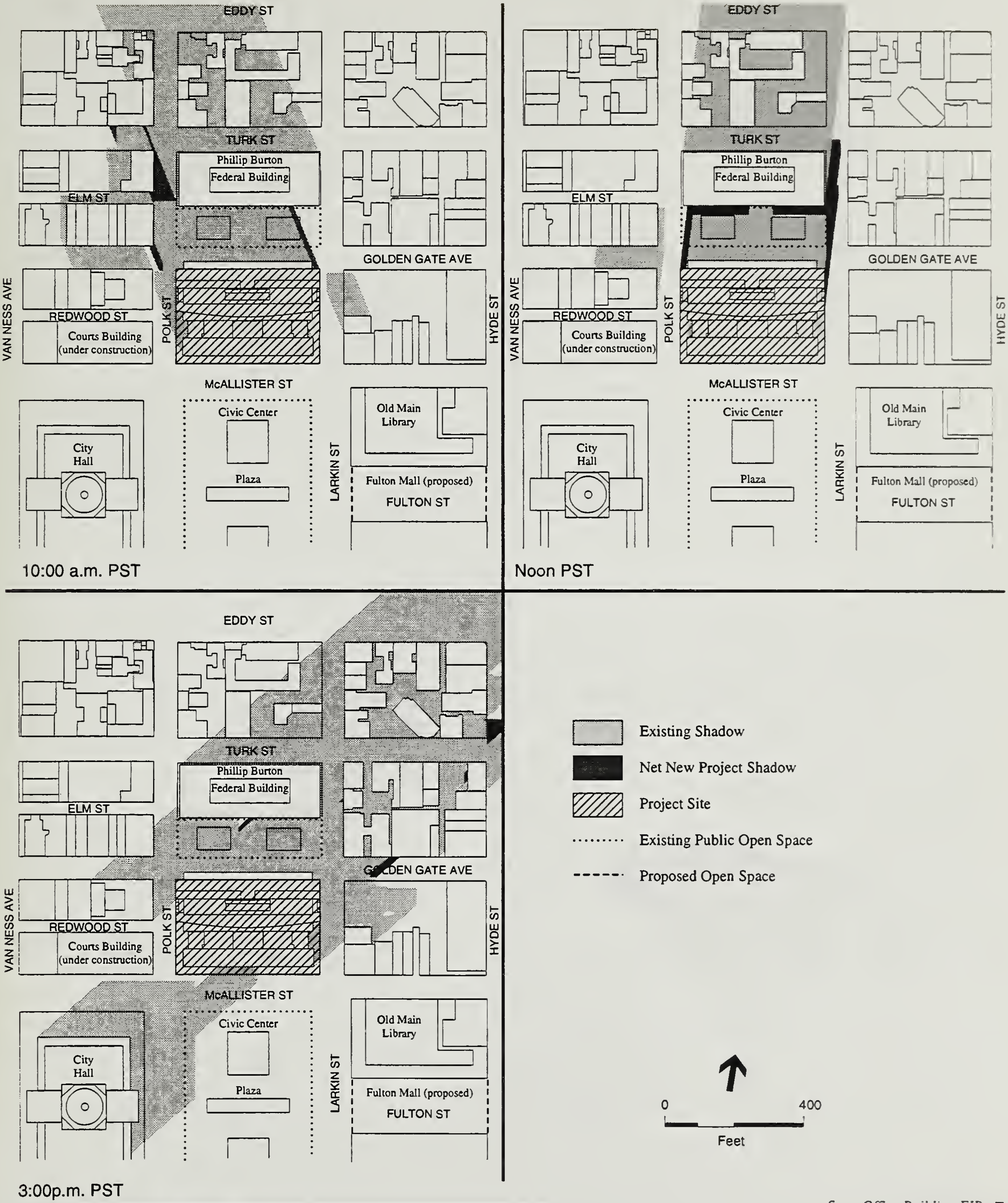
Impacts

Impact C.1: The project would add shade to streets, sidewalks, and the Federal Building plaza. Shadow effects on the Federal Building plaza could limit public use. (Not Significant)

The project would add shade to streets, sidewalks and the Federal Building Plaza during midday hours, as discussed below. Because the project would not change the exterior of the California State Building, project shadow effects would be caused by the New State Office Building, which would replace the smaller Annex on the site. The following discussion describes project shadow effects.

December 21 (PST)

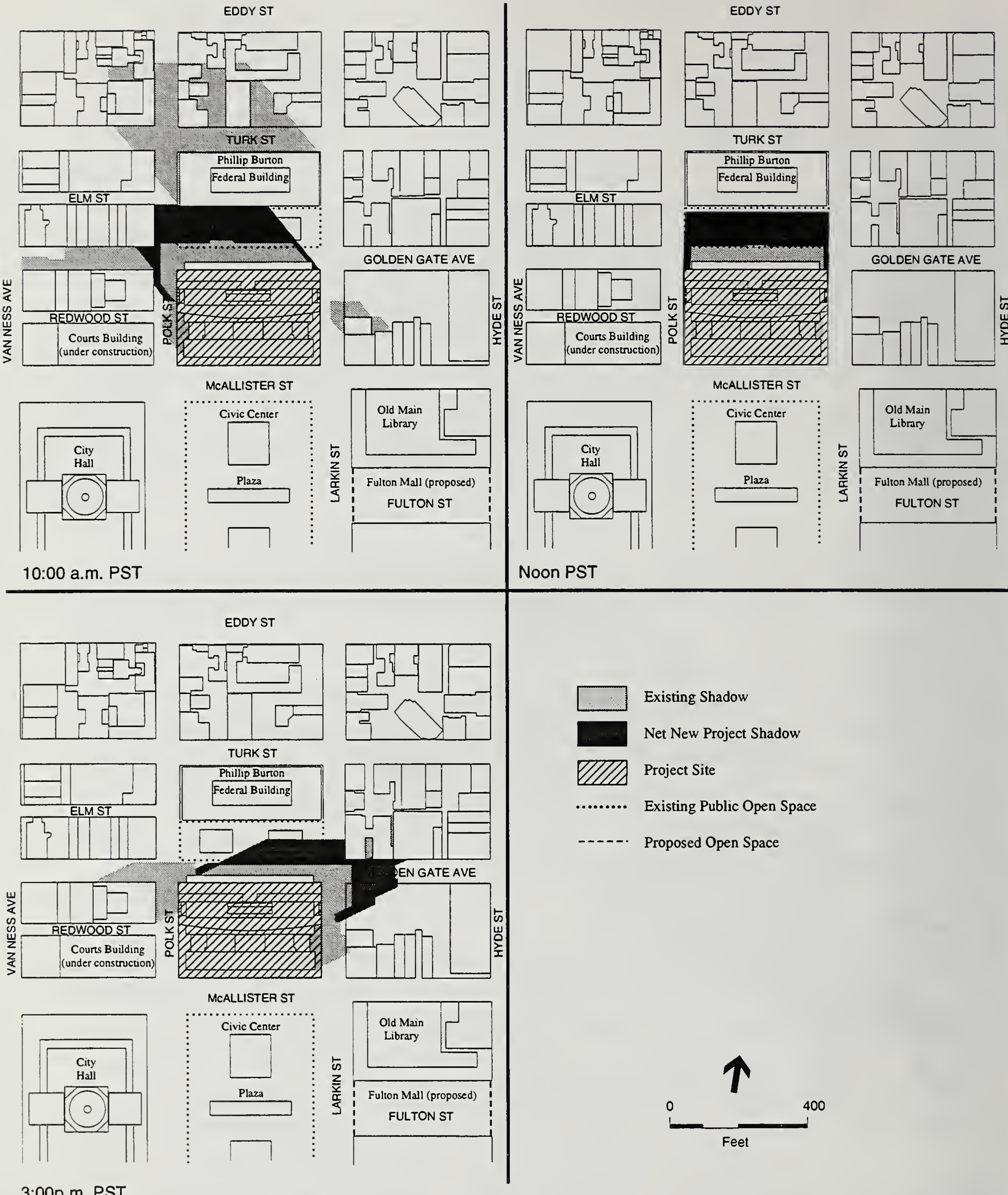
At 10:00 o'clock Pacific Standard Time (PST) on December 21 (see Figure 27, p. 63), the New State Office Building portion of the project would add about a 15-ft.-wide strip of new shadow to the easterly end of the Federal Building plaza; about 85 percent of the plaza would already be in shade at this time. The project would add about three percent net new shade, with about 12 percent remaining in the sun. The project would also shade parts of Polk, between Golden Gate Avenue and Turk Street, including the west sidewalk near Turk, and the sidewalk on Turk west of Polk Street. At 12 Noon, the New State Office Building would add about 20 percent net new shade to the westerly and northerly side of the Federal Building plaza, generally completing the shading at that time. Those newly shaded areas include driveways to basement parking. The project would also add new shade to the western sidewalks of Larkin Street, from the base of the



SOURCE: Environmental Science Associates

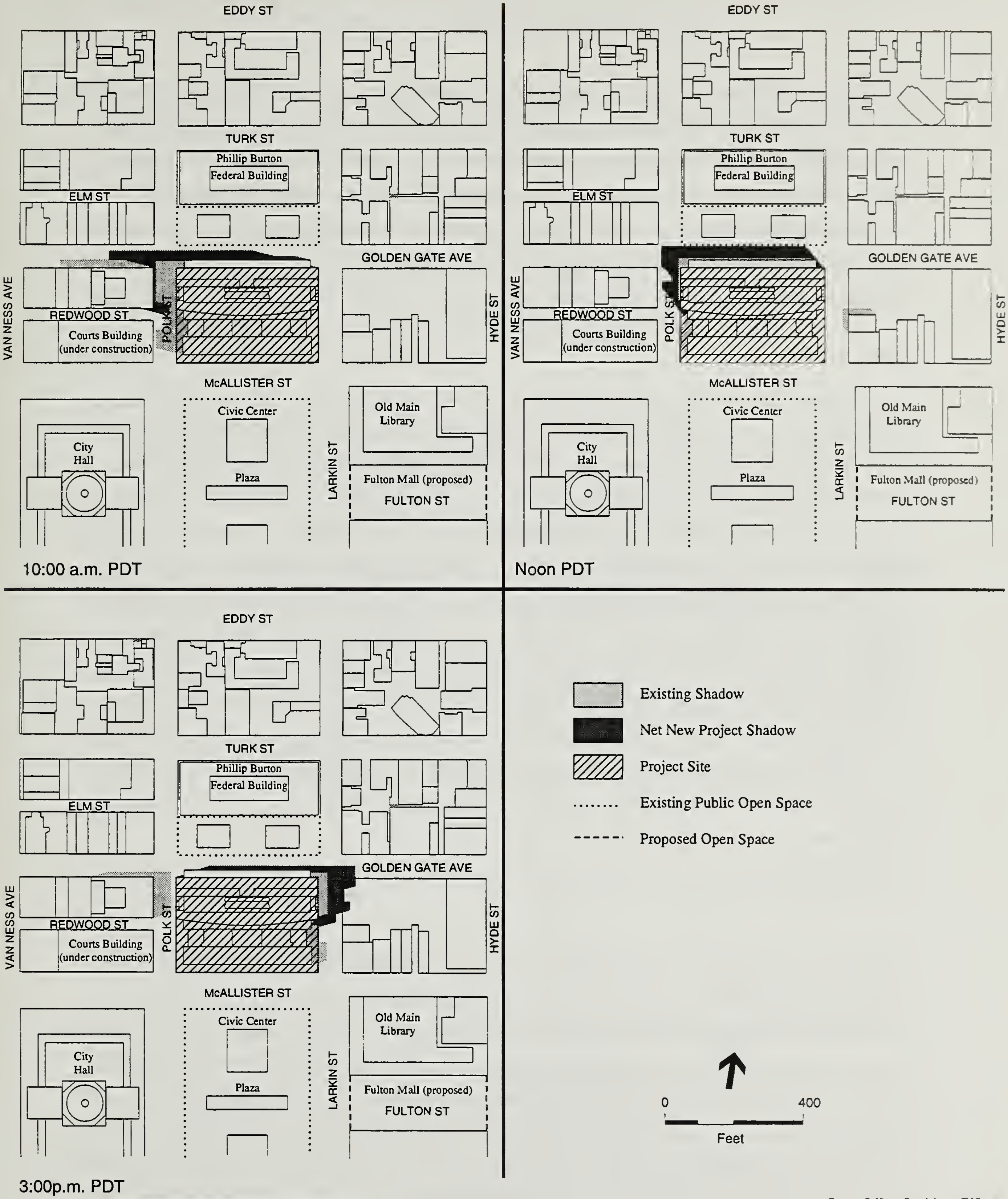
State Office Building EIR ■

Figure 27
Project Shadow Patterns-
December 21 (10 a.m., Noon, 3 p.m. PST)



SOURCE: Environmental Science Associates

Figure 28
Project Shadow Patterns-
March 21 (10 a.m., Noon, 3 p.m. PST)



SOURCE: Environmental Science Associates

Figure 29
Project Shadow Patterns-
June 21 (10 a.m., Noon, 3 p.m. PDT)

new building, to the middle of the Larkin Street / Turk Street intersection. At 3:00 p.m., most of the Federal Building plaza is already in shade; the project would add about two percent net new shade near the entrance to the Federal Building itself. The plaza would be about 98 percent in shade at that time. The project would add new shade to the north sidewalk of Golden Gate Avenue east of Larkin Street, to the east side of Larkin Street between Golden Gate and Turk, and to both sidewalks on Turk Street near Hyde Street. Those shadows would affect 20 ft. to 30 ft. of sidewalk.

March 21 (PST)

At 10:00 a.m. (PST), the project would add shade to about two-thirds of the Federal Building plaza; about 12 percent of the plaza, near Golden Gate Avenue is already in shade, and about 20 percent of the eastern end would remain in sun with the project (see Figure 28, p. 64). The project would shade Polk Street, near Golden Gate Avenue and Elm Street (the east-west alley between Golden Gate Avenue and Turk Street), including the western sidewalk. At 12 Noon, the New State Office Building would add shade to about 75 percent of the Federal Building plaza; about 15 percent is already in shade at that time. The remaining 10 percent, near the Federal Building driveways, would be in the sun. The project would also add shade near the Polk and Larkin Street entrances of the New State Office Building. At 3:00 p.m., the project would shade about one-third of the Federal Building plaza, which is now in sun at that time. There would be new shade on the Larkin Street sidewalk east of the plaza, on the north and south Golden Gate Avenue sidewalks east of Polk Street, and about 30 ft. of the Larkin Street sidewalk between Golden Gate and McAllister Streets.

June 21 (PDT)

On June 21, at 10:00 a.m. Pacific Daylight Time (PDT), the New State Office Building shadow would reach the middle of Golden Gate Avenue; it would not shade the Federal Building plaza itself, which would be in the sun at that time (see Figure 29, p. 65). There would be new shadows on the west sidewalk of Polk Street, between Golden Gate Avenue and Redwood Street. At 12:00 Noon, the plaza would be in the sun, with the new project shadow reaching the north Golden Gate Avenue sidewalk. There would be new shade on Polk Street and Golden Gate Avenue, and on sidewalks at the project site, at that time. At 3:00 p.m., the Federal Building plaza would be in the sun, and new project shade would not reach the open space. The project would cast new shadows on the east sidewalk of Larkin Street, south of Golden Gate Avenue, and the south sidewalk of Golden Gate, east of Larkin Street.

The project would include open space: two, approximately 1,200-sq.-ft., areas adjacent to the Larkin and Polk Street wings of the California State Building would become terraces with seating and plantings. A south-facing, 15th floor garden rooftop garden would encompass about 15,000 sq. ft. A 16th floor terrace would be about 1,100 sq. ft. The rooftop areas would be open to building employees, and not the general public. The Larkin Street terrace would generally be in sun in morning hours at most times of the year. Because of existing, or approved, 80-ft. buildings to the west, the Polk Street terrace would be in the sun in late spring, summer and early fall; it would be shaded in the afternoons in late fall to early spring.

As discussed above for specific times of the day and the year, the New State Office Building would add net new shade to the Federal Building plaza. Because the new building would be directly south of that plaza, the new shade would occur from mid-morning to mid-afternoon in late summer, fall, winter and spring months, with the greatest effects on new area shaded occurring in spring and fall months. Overall use of the plaza cannot be determined at this time, because about two-thirds of the plaza is now occupied by construction staging areas for on-going renovation of the Federal Building; persons have been observed sitting in the plaza during noon periods. Past use of the plaza has also been thought to have been affected by local adverse wind conditions created by the Federal Building itself (see Section III.D, Wind). Those effects would continue to exist with the project. Project shadow effects might further limit the use of the plaza during midday hours in fall, winter and spring. Because the Federal Building plaza would be expected to have limited use, project shadow effects would be considered adverse, but not significant.

Impact C.2: The project would not add shade to public open space owned by the City of San Francisco. (Not Significant)

The San Francisco Sunlight Ordinance

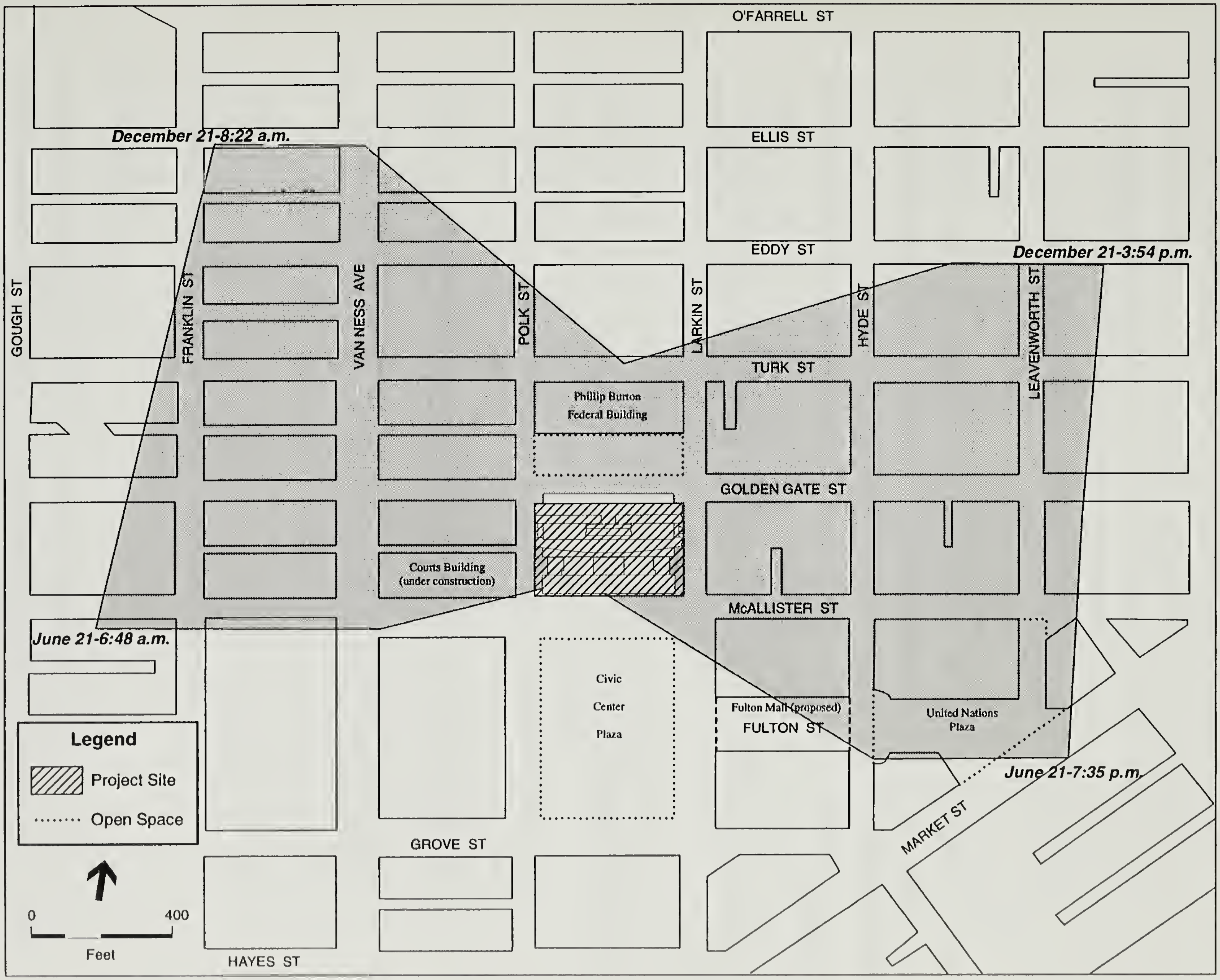
In June 1984, the voters of the City and County of San Francisco approved Proposition K, the Sunlight Ordinance (City Planning Code Section 295) prohibiting the issuance of building permits for structures that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission unless the City Planning and Recreation and Park Commissions determine that such shade would not have a significant impact on the use of such property. The Code would not formally apply to the project, under state jurisdiction.

In February 1989, the City Planning and Recreation and Park Commissions adopted shadow criteria for all 15 parks in the Greater Downtown Area. These districts, in the Greater Downtown Area, have the greatest potential for new shadow on parks because of the permitted height limits. The commissions 1) set an Absolute Cumulative Limit for new shadow for each open space; 2) (where new shadow is allowable) projected individual building impacts and allocated a portion of the additional allowable shadow among specific projects, within the Absolute Cumulative Limit; and 3) set forth qualitative criteria for new shadow. The Absolute Cumulative Limit for Civic Center Plaza, the only property in the project vicinity under the jurisdiction of the Recreation and Park Commission, is one percent additional square-foot-hours of shadow per year between one hour after sunrise and one hour before sunset throughout the year (the hours during which Section 295 applies).[1] This Absolute Cumulative Limit developed for Civic Center Plaza assumed and provided for a New Main Library approximately 80 ft. in height on the block bounded by Larkin, Fulton, Hyde and Grove Streets. The New Main Library, now under construction, and the San Francisco Courts Building, approved for construction at the northwest corner of the Polk / McAllister Street intersection, will not exceed the City's adopted limits for new shadow on Civic Center Plaza.[2]

Figure 30 shows the maximum extent of shadow generated by the proposed New State Office Building as through cast on the ground without intervening structures. This shadow trace includes all areas that could be shaded by the project during the hours when the Sunlight Ordinance applies: between one hour after sunrise and one hour before sunset, year round. The shadows of greatest length (i.e. those which extend across United Nations Plaza) would occur when the sun was relatively low in the sky, during early morning and late afternoon hours.

Effects On City of San Francisco Open Space

Shadow from the New State Office Building would not reach Civic Center Plaza at the times specified in Section 295. (The State project would not be under permit jurisdiction of the City of San Francisco, regardless.) The project would not add new shade in the vicinity of the proposed Fulton Street mall. The New State Office Building would add shade to United Nations Plaza. The new shadow would affect about a 750-sq.-ft. area near the BART entrance south of the Old Federal Building. This shading would continue for about 15 to 20 minutes a day, about one hour before sunset (around 7:00 p.m. to 7:30 p.m. PDT), in late spring and early summer (June and July). The rest of the open space south and east of the Old Main Library and the Old Federal Building would already be in shade at these times. The Heart of the City Farmers' Market



SOURCE: Environmental Science Associates

State Office Building EIR ■

Figure 30

Year-Round Shadow Trace

operates in United Nations Plaza, currently on Wednesdays and Sundays, from morning to mid-afternoon, before the occurrence of this new shade. The New Main Library EIR analyzed shadow effects of proposed re-use of the Old Main Library as the Asian Art Museum, including in-fill of the easterly portion of the Fulton-Hyde-McAllister-Larkin block with an 80-ft.-high addition to the Old Main Library. That addition, which has not been formally approved or funded, would itself shade the area of United Nations Plaza shaded by the New State Office Building.[3]

This shadow effect of the New State Office Building on a small portion of United Nations Plaza, in late afternoon, near the BART entrance would not be expected to limit substantially the use of the open space. This would not be a significant adverse effect.

<u>Mitigation</u>

No significant adverse shadow effects were identified. Therefore, no mitigation measures are proposed.

NOTES - Solar Access and Shading

1 A square-foot-hour of shadow is one square foot of ground shaded for a period of one hour.

2 San Francisco Department of City Planning, *San Francisco Courts Building EIR,* 93.546E, Certified June 23, 1994, pp. 72-74.

3 San Francisco Department of City Planning, *New Main Library EIR*, 90.808E, Certified February 27, 1992, p. 114.

D. WIND

SETTING

Wind Conditions in San Francisco

Average wind speeds in San Francisco are the highest during the summer and lowest during winter months. Strongest peak winds, however, occur in the winter when speeds of 47 miles per hour (mph) have been recorded.[1] The highest average wind speeds are in the mid-afternoon and the lowest are in the early morning. U.S. Weather Bureau and Bay Area Air Quality Management District data show that westerly, (i.e., from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.[2] Of the 16 primary wind directions measured at the Weather Bureau station (at a height of 132 ft.), four directions comprise the greatest frequency of occurrence as well as the majority of strong wind occurrences; these are the northwest, west-northwest, west and west-southwest. Calm conditions occur about two percent of the time.

The overall effect of urban development on winds is to reduce free-stream wind speed because of the drag and friction generated by buildings. However, while average wind speeds are lower in urban areas, highrise buildings can affect local wind speeds dramatically.[3]

The comfort of pedestrians vary under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four miles per hour have no noticeable effect on pedestrian comfort. With winds from four to eight mph, wind is felt on the face. Winds from eight to thirteen mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise loose paper, dust and dry soil, and will disarrange hair. For winds from 10 to 26 mph, the force of the wind will be felt on the body. With 26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise may be unpleasant. Winds over 34 mph increase difficulty with balance and gusts (associated with such winds) can blow people over.[4]

Policies and Plans

In order to provide an acceptable wind environment for people in San Francisco, the City has adopted Master Plan Policies and City Planning Code requirements related to evaluation of wind effects of new development.

Policies in the *Downtown Plan,* an element of the San Francisco Master Plan, are aimed at promoting building forms that would minimize the creation of surface winds near the base of buildings.[5] The *Downtown Plan* states that variation in ground-level wind impacts is related to several factors, including exposure of a building to the prevailing wind direction; the volume and momentum of the wind intercepted that increases the potential for wind accelerations at street level; and the shape, area and uniformity of the upwind facade. Relatively large, uniform, upwind facades typically result in greater wind accelerations than do narrow or complex facades with numerous setbacks.

To prevent unpleasant wind conditions, *Downtown Plan* policies propose that the factors influencing ground-level wind impacts be taken into account in the massing and detailing of new buildings and that exposed facades should use setbacks at various levels, and other configured shapes and design features, to reduce wind impact. The *Downtown Plan* recommends that wind tunnel tests should be undertaken and the results employed in selecting the shape of the building.

The City also established specific comfort criteria to be used in the evaluation of proposed buildings. City Planning Code Section 148, Reduction of Ground-Level Wind Currents in C-3 (Downtown Commercial) Districts and each of the ordinances regulating Rincon Hill, Van Ness Avenue, and South of Market areas [Sec. 148, 249.1(a)(3), 243(c)(8), 263.11(c)], require buildings to be shaped so as not to cause ground-level wind currents to exceed, more than 10% of the time, 11 mph in substantial pedestrian use areas, and 7 mph in public seating areas. Similarly, the Code requires that buildings not cause equivalent wind speeds to reach or exceed the hazard level of 26 mph for a single full hour of the year, or 0.011416% of the time. The wind ordinance comfort criteria is defined in terms of equivalent wind speed, which is an average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence.[6] The wind speed data upon which the comfort criteria are based were measured for one minute and averaged. In contrast, the hazard criterion is defined by winds that occur over a full hour; when stated on the same time-direction basis as the comfort criteria winds, the hazard criterion speed is represented by a one-minute average of 36 mph. In the analysis below, references to "wind speeds" are to equivalent wind speeds exceeded 10% of the time.

The project site is located in a Public Use (P) District, in which the City Planning Code wind requirements do not apply. For the purposes of this EIR, the project will be examined in relation to the wind criteria established for the areas noted above. This standard is more stringent than that legally required by the City and County of San Francisco for a project in a "P" Use District

not subject to the wind standard. The proposed project, under state jurisdiction, would not be formally subject to City codes and plans related to wind effects.

Existing Wind Conditions in the Project Vicinity

The existing conditions near the site and vicinity can be characterized as very windy. It appears that the Philip Burton Federal Building, a 300-ft. office building north of the proposed project site, on the Golden Gate-Polk-Turk-Larkin block, controls the wind conditions in its vicinity. The Federal Building, a structure substantially higher than surrounding development, intercepts the winds that otherwise would pass overhead and brings them down to ground level, and tends to create accelerated wind conditions in its vicinity, including exceedences of the hazardous wind criterion, as defined by the City.[7]

In wind-tunnel tests of the project vicinity, 29 of 38 test locations currently exceed the 11-mph pedestrian-comfort criterion (see Appendix B, p. A-28). (The test locations were in the area generally bounded by Turk Street, Van Ness Avenue, Fulton Street and Hyde Street.) Equivalent wind speeds in pedestrian areas surrounding the project site range from 9 to 23 mph. (As noted, the equivalent wind speeds in the table are those exceeded 10 percent or more of the time.) Wind speeds from 12 to 18 mph, at nine of the 11 test locations in the immediate perimeter of the proposed project block exceed the pedestrian-comfort criterion. At test locations on the project block on Larkin Street and McAllister Street, existing speeds ranged from 9 to 13 miles per hour. On both sides of Polk Street near the project block, wind speeds ranged from 10 to 15 mph, with two test locations registering speeds in excess of 13 mph. Along Golden Gate Avenue on the project block, wind speeds ranged from 12 to 16 mph for four locations. At two locations in the Federal Building plaza, wind speeds ranged from 10 mph to 23 mph. Other locations on the Federal Building block have wind speeds from 13 mph to 21 mph. At two test locations at the north end of Civic Center Plaza, across the street south of the proposed project site, wind speeds ranged from 9 to 14 mph.

All test locations currently exceed the 7-mph public seating criterion, including points in Civic Center Plaza or the Federal Building plaza.

The hazard criterion is exceeded at six of the 38 test locations in the vicinity of the project site. The total time hazard criterion is exceeded is about 157 hours per year. One of the test locations exceeding the hazard criterion is located on the Golden Gate Avenue sidewalk at the proposed

project site. The other five test locations exceeding the hazard criterion are in the block occupied by the Philip Burton Federal Building: On the corner of Polk Street and Golden Gate Avenue; on Golden Gate Avenue about halfway between Polk Street and Larkin Street; in the westerly part of the Federal Building plaza; near the southwest corner of the Federal Building; and at the corner of Turk Street and Larkin Street.

IMPACTS AND MITIGATION

Significance Criteria

A project that would cause equivalent wind speeds to reach or exceed 26 mph for a single full hour of the year would be considered to have a significant effect. This criterion is consistent with the San Francisco City Planning Code Section 148 definition of hazardous winds.

Impacts

Impact D.1: The wind environment with the project would be about the same, or improved overall, compared to existing conditions, with the project. With the project, and project plus other potential development in the vicinity, there would be fewer exceedences of the City's 11 mph pedestrian comfort criterion than with existing conditions. Under existing conditions, there are six locations at which the 26 mph hazard criterion is exceeded, five on the Federal Building block, and one on Golden Gate Avenue on the project block. With the project, and with the project plus potential development, three locations on the Federal Building block, of the six existing exceedence points, would continue to exceed the hazard criterion. The time over which hazard exceedences would occur would be reduced by about 50%. Project wind effects would eliminate existing hazard exceedence at three locations. The project would not cause an exceedence of the hazard criterion, and wind effects would not be significant. (Not Significant)

Wind-Tunnel Tests

Two phases of wind-tunnel testing were completed as part of this EIR: Prior to development of the proposed project design, the EIR consultant carried out wind-tunnel testing of the existing setting, and of five massing alternatives for the new State Office Building, at up to 47 measurement points. The alternatives tested included rectangular masses representing building envelopes meeting project floor area requirements, and alternatives with a series of setbacks or other articulation. The wind-tunnel data obtained in this first phase were used to identify 38 measurement points for the second phase of testing of the proposed project design.

The 38 points are those at which winds would be likely to be affected by changes on the project site. Appendix B, p. A-28 outlines testing methodology and includes tables and a map of data points.

Wind-tunnel tests were conducted for the project setting in its existing condition in the first phase. In the second phase, tests included the project in the existing setting (existing plus project conditions), and the project and potential development in the existing setting (project plus potential development). Thirty-eight test locations were studied for these three scenarios for three prevailing wind directions; northwest, west-northwest, and west. These wind conditions are the most representative for evaluation of the proposed building. All measurements were taken at the same series of surface points around the project site for all test configurations and wind directions included in testing.

Six of the 38 test locations corresponded to representative outdoor seating locations: two locations in Civic Center Plaza, including a location near the Civic Center tot lot near McAllister and Larkin Streets, and four locations in the Federal Building plaza. The remaining test locations are considered pedestrian areas.

The locations of the measurement points and the results of the wind-tunnel study for compliance with the comfort and hazard criteria are summarized in Appendix B, Figure B-1, p. A-35, and Table B-1 to B-4, p. A-36 to A-39. Throughout the following discussion the wind speeds reported refer to the equivalent wind speeds that would be exceeded 10% of the time.

Project Effects

Hazard Criterion. With existing conditions, six locations in the project vicinity exceed the 26-mph hazard criterion, as noted above in Setting, for a total of 157 hours per year. Four of those locations are in or adjacent to the Federal Building plaza, one is at the southwest corner of Turk Street and Larkin Street on the Federal Building block, and one is on the Golden Gate Avenue sidewalk, on the project block.

With existing-plus-project conditions, there would be three hazard exceedence locations, compared to six with existing conditions. Two locations on the westerly part of Federal Building plaza, and the Turk-Larkin location would continue to exceed the hazard criterion. Two existing exceedence locations on the Federal Building block near the Golden Gate Avenue sidewalk. and

the location on the project block would be below the hazard criterion with the project. There would continue to be no hazard criterion exceedences in Civic Center Plaza. The project would not cause a new exceedence of the hazardous wind criterion, and would reduce existing locations of exceedences in the vicinity, and total time of occurrences by a total of about 73 hours per year, leaving exceedences totaling about 84 hours per year.

Pedestrian Comfort Criterion. The wind environment with the project would be about the same, or improved overall, compared to existing conditions. Changes would range from decreases of eight miles per hour to increases of seven miles per hour (mph). Most changes would be decreases or increases of three mph or less. The project would increase winds at four locations by four to seven mph, and would decrease conditions at one location by four mph, and another location by eight mph. At test locations around the Federal Building, along Golden Gate Avenue between Van Ness Avenue and Hyde Street, on Polk Street north of Redwood Street, and on Larkin Street between McAllister and Turk, the project would reduce wind speeds, generally by one mph to three mph. Winds on Polk Street south of Redwood would increase by two mph to three mph.

At the proposed New State Office Building entrances on Golden Gate Avenue, Polk Street and Larkin Street, wind speeds would be reduced by one to three mph. At the McAllister Street entrance of the California State Building, the existing nine mph speed would be unchanged. The proposed 15th floor roof-top terrace of the New State Office Building would have wind speeds of about 11 mph. Wind speeds near the entrance of the under-construction San Francisco Courts Building, at Polk and McAllister, would be reduced, from 15 mph to 11 mph.

At test locations in the north end of Civic Center Plaza, the project would increase wind speeds at one location, from 14 mph to 17 mph, and at a second, from 9 mph to 16 mph. Locations in the Federal Building plaza would generally be reduced by one mph. One location in the easterly portion of the plaza would increase from 10 mph now to 15 mph with the project.

In relation to the City's Pedestrian Comfort Criterion, the project would cause four new exceedences of the 11 mph criterion: Near the southeast corner of the Federal Building plaza (increasing from 10 mph to 15 mph); at the northeast corner of the Van Ness Avenue and Golden Gate Avenue (from 10 mph to 13 mph); on the west side of Polk Street at Redwood Street (from 10 mph to 13 mph); and near the northeast corner of Civic Center Plaza (from 9 mph to 16 mph). At six locations, winds which now exceed the pedestrian criterion would decrease below that

threshold: At the southwest corner of Larkin Street and Golden Gate Avenue, on the project block (a decrease from 12 mph to 9 mph); on Golden Gate Avenue west of Polk Avenue (from 12 mph to 10 mph); at the southeast corner of Van Ness Avenue and Golden Gate Avenue (from 13 mph to 9 mph); on the west side of Larkin Street, on the project block midway between McAllister Street and Golden Gate Avenue (from 12 mph to 10 mph); and at the northwest corner of McAllister Street and Polk Street (from 15 mph to 11 mph). Compared with existing conditions, wind speeds would increase at 11 locations, decrease at 20 locations, and not change at seven locations. Generally, wind speeds around the project block would range from nine mph to 15 mph. At 11 locations, wind speeds would decrease by up to one to three mph, but continue to exceed the 11 mph pedestrian criterion; at two locations already below the criterion, winds would decrease with the project by two to three mph.

All test locations in potential seating areas in Civic Center Plaza or the Federal Building plaza would continue to exceed the 7-mph seating criterion. A test location near the Civic Center Plaza tot lot (playground) would change from 9 mph, above the 7 mph seating criterion and below the Pedestrian Comfort Criterion, to 16 mph with the project, exceeding the pedestrian criterion.

Project Plus Potential Development Effects

This tested scenario considered the project in the context of potential future development in the vicinity of the project site. The under-construction San Francisco Courts Building at the northwest corner of Polk Street and McAllister Street; the potential office building at the southeast corner of Van Ness Avenue and Golden Gate Avenue; the 600 Van Ness Avenue retail-residential project, in public review; the approved 650 Van Ness Avenue retail-residential project; and the potential development on the basis of the zoning envelope of the Hastings College of the Law property at the southeast corner of Golden Gate Avenue and Larkin Streets, were included in this scenario.

Hazard Criterion. As with the existing-plus-project condition, this scenario would have three locations at which the 26-mph hazard criterion would be exceeded, compared to six locations with existing conditions. The three exceedence locations would be the same Federal Building block exceedence points that would occur with the existing-plus-project scenario. The project would not cause a new exceedence of the hazardous wind criterion, and would reduce existing

occurrences of exceedences in the vicinity. Total hours of exceedence would be about 80 hours per year.

Pedestrian Comfort Criterion. The wind environment of the project plus potential development would be similar, or improved, compared to that of the existing-plus-project case, with wind speeds increasing by up to seven mph and decreasing by nine mph from existing conditions, and increasing or decreasing by one or two mph from speeds noted for the project alone. Compared to the existing setting, wind speeds would decrease at 25 locations, increase at 10 locations and remain the same at three locations. The pattern of wind speed reduction around the Federal Building, Golden Gate Avenue, and Larkin Street, and wind speed increases in Civic Center Plaza with existing-plus-project conditions would be similar with project-plus-potential development conditions. At 17 locations, winds would be below the 11 mph pedestrian criterion, including 12 locations where the pedestrian criterion is exceeded under existing conditions. Twenty-one locations would exceed the pedestrian criterion, including four locations where winds are below 11 mph with existing conditions. (Those four points would be at the same locations as the four new exceedences with the existing-plus-project scenario, including one location in the Federal Building plaza, and one in Civic Center Plaza). This can be compared to 12 out of 38 locations that would be below the 11 mph criterion with the existing-plus-project case.

All test locations in potential seating areas in Civic Center Plaza or the Federal Building plaza would continue to exceed the 7-mph seating criterion.

Mitigation

No significant adverse effects for Wind were identified. Therefore, no mitigation measures are proposed.

NOTES - Wind

1 The U.S. Weather Bureau data used in this analysis were originally gathered at the weather station atop the Old Federal Building at 50 United Nations Plaza during the years 1945-1950. Data were taken hourly, annually for 16 wind directions. The data base, comprised of 32,795 hourly observations, is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

2 E. Jan Null, *Climate of San Francisco*, NOAAA Technical Memorandum, NWS WR-126, February 1978.

3 City of San Francisco Department of City Planning, *Downtown Plan*, an Element of the Master Plan, 1984.

4 Lawson, T.V. and A.D. Penwarden, *The Effects of Wind on People in the Vicinity of Buildings*, Proceeding of the Fourth International Conference on Wind Effects on Buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., 605-622 1976.

5 City of San Francisco Department of City Planning, *Downtown Plan*, an Element of the Master Plan, 1984.

6 Equivalent mean wind speed is defined as $W_{eq} = W_m (1 - 3T_i)/ 1.45$, where W_{eq} is equivalent wind speed, W_m is mean wind speed, and T_i is turbulence intensity.

7 Environmental Science Associates, Inc, *Appendix: Wind Tunnel Results and Design Considerations*, May 4, 1994, for California Department of General Services, Office of Project Development and Management.

E. CULTURAL RESOURCES

SETTING

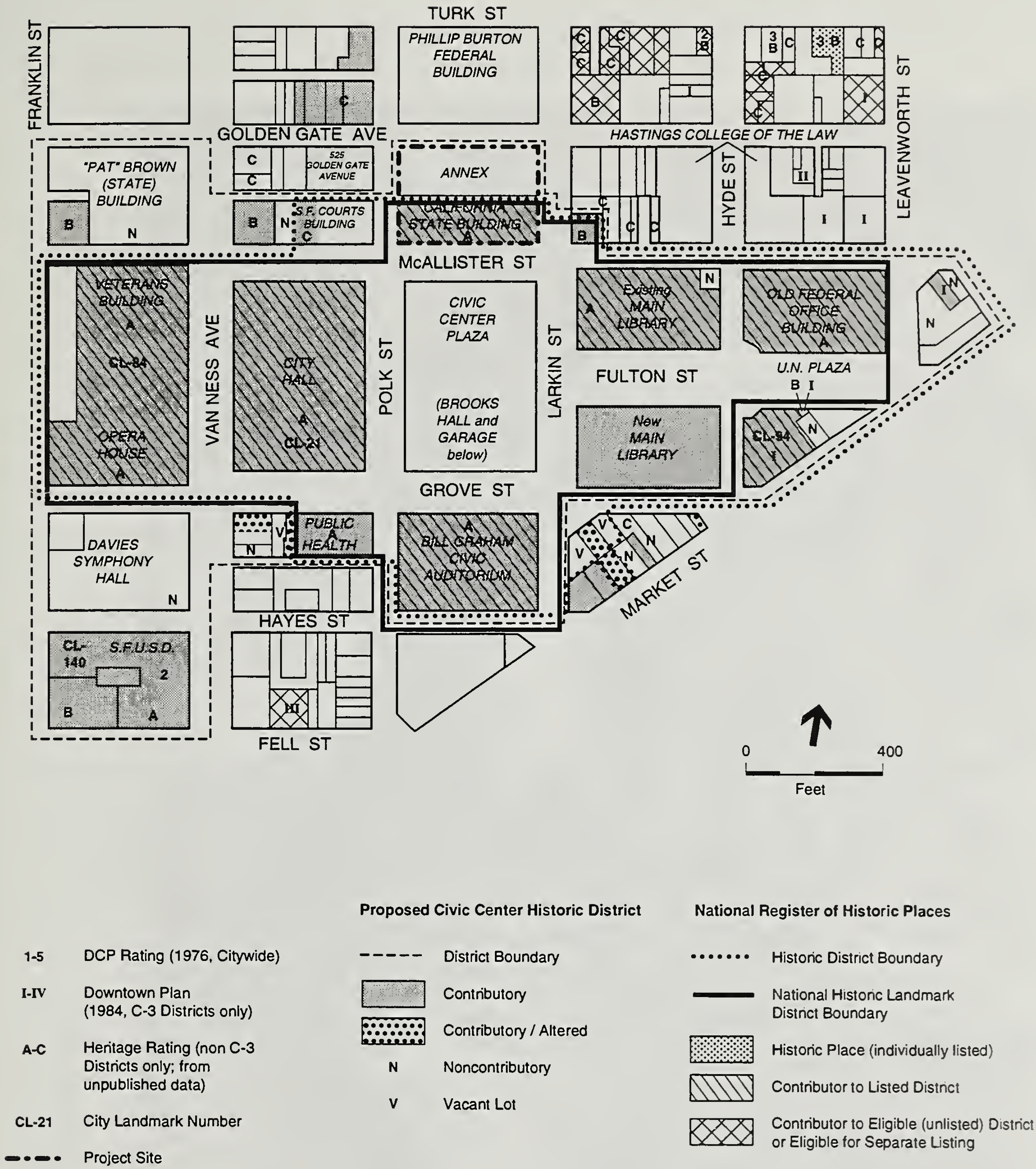
Architectural Surveys

There have been two major architectural surveys conducted in the core Civic Center area of San Francisco. The San Francisco Department of City Planning (DCP) conducted a citywide inventory of architecturally significant buildings in 1976. Approximately ten percent of the City's entire stock of buildings was awarded a rating for architectural merit ranging from "5" (highest overall significance) to "0" (contextually significant). The other major architectural survey which classified buildings in the Civic Center area was conducted by the Foundation for San Francisco's Architectural Heritage (Heritage). Heritage used letter codes ranging from A (highest significance) to D (minor or no significance).[1] The City Planning Commission used these two surveys in developing the Downtown Plan categories "I" (significant) through "IV" (contextual value). The Downtown Plan does not include the Civic Center proper, but does include buildings in the immediate vicinity. Similarly, the Landmarks Preservation Advisory Board and the City Planning Commission used the 1976 Department of City Planning Inventory and Heritage ratings in developing the proposed local Civic Center Historic District.

Figure 31 identifies buildings in the project area that are City Landmarks and/or included in the Downtown Plan inventory. Buildings listed in the Department of City Planning 1976 Architectural Inventory outside the C-3 districts and outside of the proposed historic district are also shown. Throughout the entire area, Heritage ratings are also indicated. Additionally, Figure 31 delineates the boundaries of the proposed local Civic Center Historic District, which includes the entire proposed project site. Also shown are the boundaries of the existing Federal National Register Historic District and National Historic Landmark District. These two national districts have similar but not identical boundaries. Both of these boundaries include the California State Building, but not the northern half of the block on which the Annex is sited.

Civic Center and Historic Districts

The project site is in the San Francisco Civic Center, a group of primarily public buildings that makes up what is considered one of the nation's largest and finest collections of buildings in the Beaux Arts style, a monument to the City Beautiful movement[2] (see Figure 32). The southern half of the project site, which includes the California State Building, is within the San Francisco



SOURCE: San Francisco Department of City Planning; Downtown Plan; *Splendid Survivors*; Foundation for San Francisco's Architectural Heritage; State Office of Historic Preservation; Environmental Science Associates

Figure 31
Architectural Resources in Project Vicinity

State Building

SOURCE: Moulin Studios; Carey & Co.

State Office Building EIR ■

Figure 32
View of Civic Center,
circa 1920

Civic Center National Historic Landmark District. It is also within the San Francisco Civic Center National Register Historic District. Additionally, the San Francisco Landmarks Preservation Advisory Board and City Planning Commission have proposed a local Civic Center Historic District with more extensive boundaries, including the Annex (see Figure 31).

The National Historic Landmark District nomination identifies three major areas of significance for the Civic Center.[3] First, the site is of national and international importance as the location of the founding of the United Nations, and the drafting and signing of post-World War II peace treaties with Japan. Second, the Civic Center's heroic and monumental layout embodies San Francisco's resurgence of importance after the 1906 earthquake and fire. Finally, it is generally regarded as one of the finest and most complete examples of the City Beautiful ideal extant in the United States. The City Beautiful movement promoted the ideals of Classical architecture, Beaux Arts axial planning on a grand scale, and the necessity of compatible design among cooperating architects to create an overall integrated ensemble.

The proposed local Civic Center Historic District, like other San Francisco historic districts, would include controls on demolition and alteration of structures on an area basis, rather than building-by-building as is the case with City Landmarks. Previously designated individual City Landmarks within the district's boundaries would remain as such if the local historic district is adopted. Any alteration or demolition within local historic districts would be reviewed by the San Francisco Landmarks Preservation Advisory Board for a Certificate of Appropriateness. However, since the project site is state property, it would not be formally subject to local ordinances and review procedures.

The Civic Center is designated as both a National Historic Landmark District and a Historic District on the National Register of Historic Places. These designations offer recognition that certain properties in the district are worthy of preservation and limit alterations in federally-funded projects. The National Historic Landmark District designation entails a somewhat higher degree of review. Neither designation imposes conditions on alterations or demolition for non-federally funded projects, as would a city-designated historic district. The proposed project would not include use of Federal funds for construction. Therefore, Section 106 of the National Historic Preservation Act of 1966, as amended, would not apply.

The area encompassed by the National Register Historic District is also listed on the California State Register, as National Register designations are automatically included. State Register

status does not in itself trigger additional review for the proposed project. However, a project by a state agency, in this case the Department of General Services, would be subject to Executive Order W-26-92, an administrative and instructive policy which emphasizes the obligation of state agencies to comply with the provisions of Section 5024.[4] Pertinent excerpts from Section 5024.5 of the Public Resources Code state the following:[5]

> "(a) No state agency shall alter the original or significant historical features or fabric, or transfer, relocate, or demolish historical resources on the master list maintained pursuant to subdivision (d) of Section 5024 without, early in the planning processes, first giving notice and a summary of the proposed action to the officer who shall have 30 days after receipt of the notice and summary for review and comment."
>
> "(b) If the officer determines that a proposed action will have an adverse effect on a listed historical resource, the head of the state agency having jurisdiction over the historical resource and the officer shall adopt prudent and feasible measures that will eliminate or mitigate the adverse effects. The officer shall consult the State Historical Building Safety Board for advice when appropriate."
>
> "(c) Each state agency shall maintain written documentation of the officer's concurrence with proposed actions which would have an effect on an historical resource on the master list."
>
> "(e) The officer may monitor the implementation of proposed actions of any state agency."

History of the Civic Center

Before the 1870s, most of the city's public buildings surrounded Portsmouth Square, the nucleus of early San Francisco, about 1.5 miles northeast of the project site. The present Civic Center has been the site of City government for more than 110 years. Between 1888 and 1899, the California Supreme Court was a five-story brick courthouse on the east end of the current site of the California State Building, at new McAllister and Larkin Street. Following the destruction of the former City Hall (near the site of the present New Main Library) in the 1906 Earthquake and Fire, the Board of Supervisors approved a new overall plan for the Civic Center in 1912. Bernard J. S. Cahill's design was chosen but it included many elements similar to Daniel Burnham's City Beautiful scheme, which he proposed for San Francisco before the earthquake. Cahill's plan can be seen today in the layout of City Hall (1915; City Landmark No. 21), Civic Center Plaza (1915; redesigned in 1958 following construction of Civic Center Garage), Civic Auditorium (1915), the current Main Library (1917, on the site of an originally proposed Opera House), and the State Building (1923). Later the Civic Center was extended westward by

construction of the War Memorial Complex of the Opera House and Veterans Building (1932; City Landmark No. 84) and the Department of Public Health (begun in 1917 and completed in 1932). Eastward to Market Street, the Federal Office Building (1936) on United Nations Plaza completed this phase of expansion in the 1930s. The Civic Center Steam Plant, built at Larkin and McAllister Streets (1915), is a public structure with similar classical details, but it deviates from the original 1912 plan in its scale and siting. Originally, large-scale buildings with a corner diagonal orientation were intended for the edge sites of the plaza. The only realization of this original plan occurs at the 1932 Department of Public Health Building, at Grove and Polk Streets.

Each of the nine buildings above is considered contributory in the National Register Historic District and National Historic Landmark District and has been rated as such in the proposed local San Francisco Civic Center Historic District. Other architecturally important buildings in the City's proposed Civic Center Historic District are the San Francisco Unified School District Headquarters at 135 Van Ness Avenue at Hayes (City Landmark No. 140), the Methodist Book Concern at 83 McAllister Street (Downtown Plan Category I), and various interior spaces of some key Civic Center buildings. Newer buildings in the proposed historic district include the Governor Edmund G. Brown State Office Building (1986) at Van Ness and McAllister Street and Davies Symphony Hall (1980) at Van Ness Avenue and Grove Street. These recent public buildings in the vicinity and the new public library under construction, are considered contextually responsive to the contributory Civic Center buildings.

Visually, all contributors to the Historic Districts use a Classical vocabulary, are faced with stone or terra-cotta to simulate stone, and are Beaux Arts interpretations of the Italian Renaissance style. City Hall is intentionally the most prominent structure: its dome tops off at 300 ft., considerably above the building's 80-ft.-high wings. The other Beaux-Arts buildings in the complex maintain the 80-ft.-high standard to complement and enhance City Hall as the district's prominent structure. The California State Building, discussed below, is consistent with this height and vocabulary.

The Annex (1957), at 455 Golden Gate Avenue, is on the northern half of the project site, and is part of a grouping of Civic Center structures from the late 1950s. Those include the State Office Building (1959) at 525 Golden Gate Avenue and the 20-story-tall Phillip Burton Federal Office Building (1959) at 450 Golden Gate Avenue. These buildings, all under 50 years old, have not been designated as historically significant. Specifically, the Annex has been listed as non-

contributory in all architectural surveys. Both of these newer state buildings were designed to be compatible in scale, massing, height, and setbacks to the buildings in the historic Civic Center (see Figures 33 and 34.a).

Many noted San Francisco architects contributed to the design of the Civic Center. Bernard Cahill's Civic Center Plan became the basis for the scheme adopted in 1912. Arthur Brown Jr. was the architect for many Civic Center buildings, including City Hall (with John Bakewell Jr.), the War Memorial Complex (with G. Albert Lansburgh), and the Old Federal Office Building. The other key architects were George Kelham who designed the Main Library, John Galen Howard, Frederick H. Meyer (designer of the steam plant), and John Reid Jr., who designed Civic Auditorium and implemented the 1912 Civic Center Plan. Walter D. Bliss and William B. Faville designed the California State Building. More recently, the firm of Skidmore, Owings & Merrill was the architect for the Governor Edmund G. Brown State Office Building, Davies Symphony Hall, and a major addition to the Opera House (1976).

Project Site

Two structures currently occupy the project site. The California State Building (350 McAllister Street) occupies the southern half of the site, while the Annex (455 Golden Gate Avenue) occupies the remainder of the site. These buildings are attached at the center of the block, permitting access between them from the central lobby and the two side wings of the California State Building. Lightwells and access driveways (remnants of Redwood Street) separate the two buildings in the middle of the block. Functionally connected, they are visually quite distinct.

The California State Building

The California State Building, completed in 1923, was designed by Bliss & Faville, San Francisco architects with a large and successful practice. Other buildings in San Francisco by Bliss & Faville include the Bank of California of 1908 (400 California Street); the Metropolitan Club of 1916-1922 (640 Sutter Street); and the Southern Pacific Building of 1915 (One Market Street). Bliss & Faville's design was selected in a design competition sponsored by the State Architect. The competition was held between August 1916 and February 1917, and was open only to architects in California. The design was criticized by some local architects, particularly Willis Polk, for failing to harmonize with the existing Civic Center buildings. He specifically commented on the large scale of the building with an excessively tall three-story base and an

SOURCE: Moulin Studios; Carey & Co.

Figure 33
View of California State Building, Annex
and Phillip Burton Federal Building,
circa 1964

a. View North on Polk Street, from Southwest Corner of Polk and McAllister Streets

b. View of California State Building, circa 1922

SOURCE: Carey & Co. (Top Photo)
San Francisco Public Library; Carey & Co. (Bottom Photo)

State Building EIR ■

Figure 34
Photographs of Site

exterior with puny details.[6] Others, believing some variety in the Civic Center desirable, praised the State Building for its subtlety and restraint.

The State Building was assigned the highest rating of "5" in the 1976 DCP Architectural Inventory and the highest rating of "A" by Heritage. It is considered a Contributory building in the proposed local Civic Center Historic District and is a Contributory building within the National Register and National Historic Landmark Districts. The State Office of Historic Preservation considers the California State Building eligible for individual status on the National Register for its distinction as a government building and its association with the history of the Supreme Court of California.

The discussion of the exterior and interior architectural features of the California State Building is based on the Building Evaluation Report prepared by Casey and Co., for the State Office of Project Development and Management.[7] That report includes professional judgments, cited herein, of the importance of building components, based on on-site observation and documentary research. The judgment methodology use four ratings:

> *Very Significant* - The space or components are central to the building's architectural and historic character.
>
> *Significant* - The space or components are associated with the qualities that make the building historically significant. They make a major contribution to the structure's historic character.
>
> *Contributing* - The space or components may not be extraordinarily significant as isolated elements but contain sufficient historic character to play a role in the overall significance of the structure.
>
> *Non-Contributing* - The space or components are not historic, or are historic but have been substantially modified. Little or no historic character remains.

Table 3 is a summary of the Carey & Co evaluation of the California State Building interior spaces and components.

The California State Building is a granite-and-terra-cotta-clad steel-frame building, approximately 75 ft. high at the cornice line (the visual terminus of the building), with six stories of varying height. The original floor plan was ring-shaped at the lower stories, and T-shaped at the upper floors, with the leg of the "T" later forming one of the connections to the Annex. The building was designed in the Italian Renaissance style. The main McAllister Street

TABLE 3: SUMMARY OF THE CALIFORNIA STATE BUILDING INTERIOR EVALUATION

Building Spaces

Entry/Lobby spaces, *(Historic Value: Very Significant):* These primary circulation spaces consist of the main entry, and the lobby spaces accessing the main vertical circulation elements. They are centered at each floor, on the south side of the building.

Transitional lobbies, *(Historic Value: Non-contributing)*: These spaces form the primary transitional lobbies between the California State Building and the Annex at 455 Golden Gate Avenue.

Main corridors, *(Historic Value: Significant)*: These double-loaded corridors comprise the main circulation spine of the building, running east and west on the south side of the building.

Side and back corridors, *(Historic Value: Contributing)*: These corridors comprise the secondary circulation arteries, running north and south at the sides of the building, and east and west along the building's north side on the first and second floors.

Service corridors, *(Historic Value: Significant or Contributing)*: These basement corridors are of two types. The central north-south corridor, which functions as an elevator lobby, and standard corridors, which run east and west in a ring formation.

Primary staircases, *(Historic Value: Very Significant):* These staircases provide access from the basement to the sixth floor, and to the attic. They are located in the main circulation core of the building, beside the elevator banks.

Secondary staircases, *(Historic Value: Contributing)*: These original staircases provide a secondary means of egress at either end of the main corridor.

Modern staircases, *(Historic Value: Non-contributing)*: These modern staircases were constructed in the 1960's, and are entirely non-contributing.

Passenger elevators, *(Historic Value: Non-contributing)*: Originally, the building was serviced by two banks of elevators, each with two cabs. Currently, only the western bank survives. The original foliate-pattern cast-iron elevator door surrounds remain at both the functional western elevator bank, and non-functioning eastern bank, and are considered significant components.

Supreme Court room, *(Historic Value: Non-contributing; Surviving historic fragments: Very Significant):* The Supreme Court is located at the center of the fourth floor, in the main central space to the north of the elevator lobby.

TABLE 3: SUMMARY OF THE CALIFORNIA STATE BUILDING INTERIOR EVALUATION (Continued)

Appellate Court Room, *(Historic Value: Contributing; Surviving historic fragments: Significant):* The Court of Appeals on the east side of the fourth floor has been partitioned into several offices. Remaining original finishes include a low wood wainscot.

Very Special Offices, *(Historic Value: Very Significant and Significant)*: The Governor's suite is on the south side of the second floor, just west of the lobby. The Attorney General's suite is in the southwest corner of the sixth floor. The Chief Justice' suite is on the south side of the fourth floor, just east of the lobby.

Judges' suites, *(Historic Value: Significant)*: In addition to the Chief Justice' suite, there are eight Judges' suites on the south side of the fourth floor. Two are larger versions of standard offices, while the remaining six are more elaborate.

Typical offices, *(Historic Value: Contributing)*: Standard offices, found on all floors, are small rectangular units accessed directly from corridors.

Modern offices and staff rooms, *(Historic Value: Non-contributing):* Non-contributing office spaces occur throughout the building where substantial alterations have occurred.

Original public restrooms, *(Historic Value: Significant)*: Some intact and nearly-intact restrooms remain in the California State Building, all on the fourth floor. All except 483 are arranged in a suite with a janitor closet and entry vestibule.

Non-contributing public restrooms, *(Historic Value: Non-contributing)*: Like the original public restrooms, these spaces typically are a part of a suite, with an entry vestibule and janitor closet. They are currently the predominant restroom type.

Original private restrooms, *(Historic Value: Significant)*: Private restrooms typically occur as part of special office suites.

Janitor closets, *(Historic Value: Contributing):* These spaces are typically located as part of a three-room suite consisting of restroom, vestibule and janitor closet.

Utility spaces, *(Historic Value: Contributing and Non-contributing):* These spaces occur throughout the building and include telephone and electrical closets, as well as mechanical rooms.

Vault, *(Historic Value: Room; Non-contributing; Door, Significant)*: The vault is located in the northwest quadrant of the basement.

TABLE 3: SUMMARY OF THE CALIFORNIA STATE BUILDING INTERIOR EVALUATION (Continued)

Building Components

Significant building components include the following:

Standard Floor Finishes: Surviving early standard floor finishes include wood tongue-and-groove, brown battleship linoleum, marbleized linoleum, unfinished concrete, and porcelain tile.

Marble Finishes: Marble is a scarce material in the California State Building, originally occurring only occasionally, as a threshold at some toilet rooms.

Terrazzo: Terrazzo is used throughout the building as a floor finish, threshold, trim, wall panel material and toilet partition material.

Ornamental Plaster: Both run-in-place and cast plaster occur in the California State Building, primarily in entry spaces, stair landings, and special offices.

Flat Plaster: Flat plaster occurs throughout the building.

Tile Finishes: Original private restroom floors consist of glazed 1" or 2" hexagonal ceramic tiles. Glazed white ceramic tile walls occur in original public and private restrooms and janitor closets.

Wood Trim and Wall Types: Standard wood trim at the California State Building includes profiled oak baseboard and picture molding, flat and profiled oak door trim, and profiled window trim. Full-height wood partitions also exist in the California State Building, although it is not a prevalent wall type.

Wood Paneling and Wainscot: Full-height wood paneling occurs in very special offices.
Interior Doors: Most original doors are two-paneled wood, 1-3/4" thick.

Interior Glazing: Interior glazing occurs as an element of some interior doors, and as interior clerestory and transom windows.

Cast-Iron Elements: The two main staircases have cast-iron stringers, risers, newel posts and balustrades, with terrazzo treads. The secondary staircases are concrete with cast-iron balustrades and newel posts. Original passenger elevator doors are framed by cast-iron surrounds in a foliated pattern.

Hardware: While virtually all locksets have been removed from interior doors for security reasons, original hinges, door closers, transom hardware and some pulls, push plates and doorknobs remain in place.

TABLE 3: SUMMARY OF THE CALIFORNIA STATE BUILDING INTERIOR EVALUATION (Continued)

Light Fixtures: Few original light fixtures remain in the California State Building. There are some period contributing fluorescent light fixtures still in place.

Plumbing Fixtures: Several original plumbing fixtures remain in the California State Building. These include flush-valve toilets, floor-mounted and wall-hung urinals, wall-hung lavatories, and slop sinks.

Building Services: Building services are original, utilitarian features of the building related to fire suppression, building maintenance and elevator operation. These include pneumatic vacuum cleaning outlets, fire hoses in cabinets, fire hose bibs, and elevator-operating equipment in the attic. A unique feature of this building is the original electrical raceway running along the tops of the walls in the main corridor. This feature has wooden cover plates with brass knobs and is part of the mechanical/electrical soffit running along the main corridor walls.

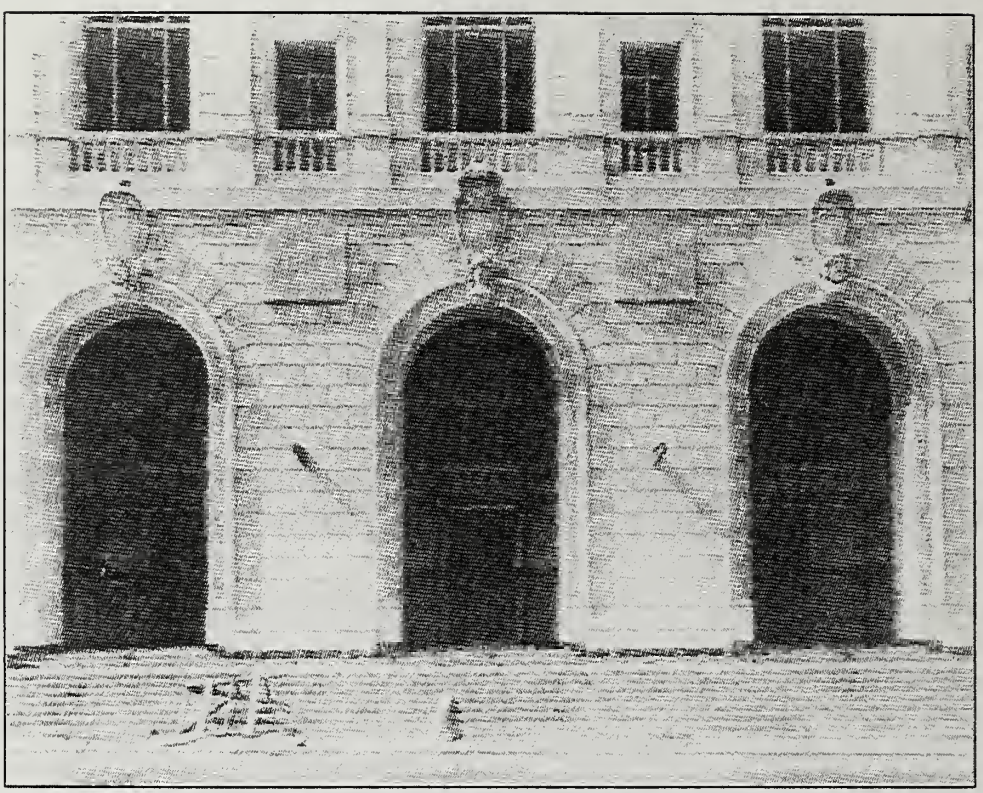
Radiators and Grilles: Radiators are simple utilitarian tubular cast-iron units with steam valves, placed under windows.

Cloak-and-Wash Cabinets: Cabinets were originally installed in every office in the building. These units are freestanding wood cubicles.

Mailbox and Chute: The bronze mailbox in the first-floor lobby, and the vertical mail delivery chute, are significant features in this building.

SOURCE: Carey & Co. Inc.

facade and two side elevations on Polk and Larkin Streets are divided horizontally into three parts, with a light rustication[8] forming an overall background (see Figure 34.b, p. 88). The first three stories compose the base. This area is simply detailed with unframed, rectangular window openings as the primary relief. At the center of the McAllister Street facade the treatment changes. Here, three monumental arches, each two stories high, form the main entry to the building. Arches lead to a vaulted entry vestibule (see Figures 35.a and 35.b). The second level of the building, separated from the base by a horizontal belt course and balustrade, is divided into bays by colossal Corinthian pilasters. Monumental arches alternate in the bays with pedimented windows. A projecting cornice divides the second level from the attic level and



a. View of California State Building Entrance on McAllister Street

b. View of California State Building Entry Vestibule

SOURCE: Carey & Co.

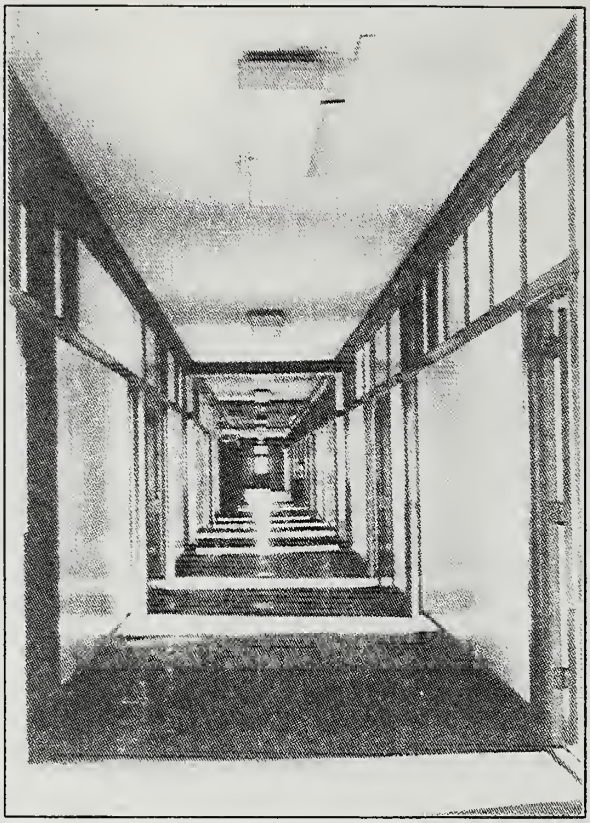
Figure 3
Photographs of Sit

roof. The attic level is simply detailed; rectangular windows alternate with shallow piers. Decorative cresting tops the wall, and a shallow hipped roof completes the structure (see Figure 34.b, p. 88).

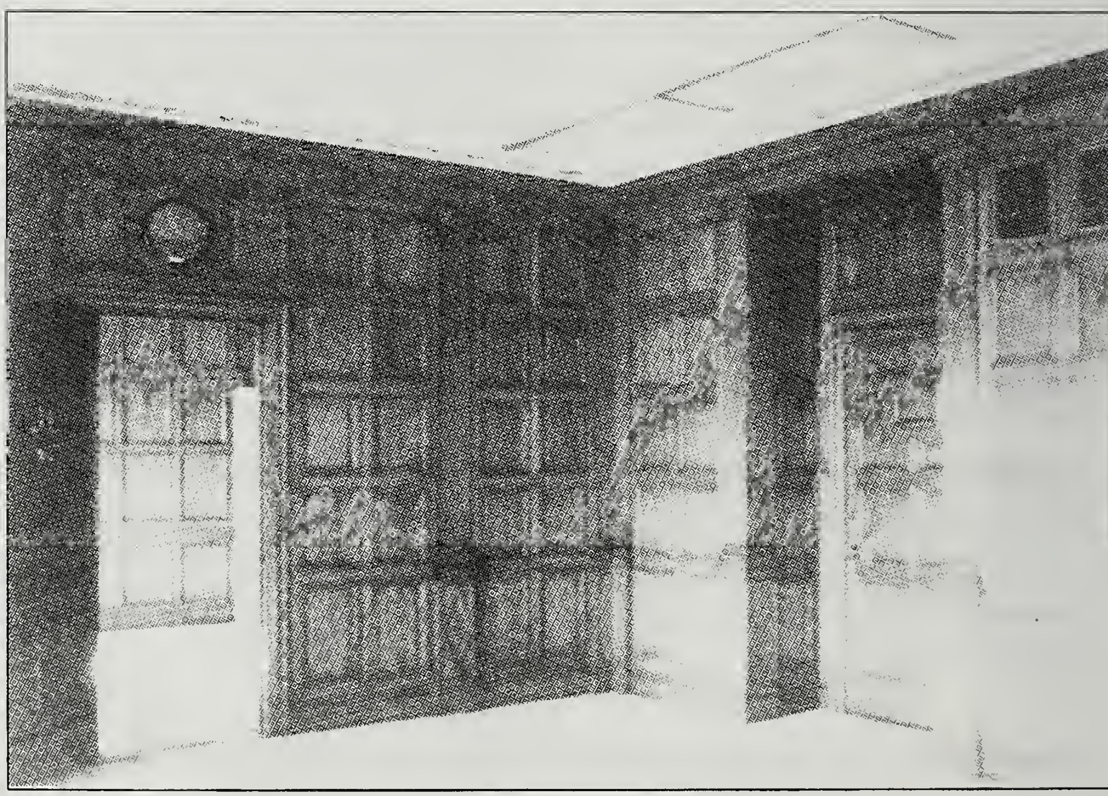
Both side elevations extend around the Larkin and Polk Street corners, with the same architectural treatment as the McAllister Street facade. These elevations are each three bays wide, with a monumental arched window in the central bay. Wing additions, dating from 1930, extend the building north an additional three bays on both sides, also each connected to the later Annex. These wings are set back slightly, and are detailed similarly to the original building, but without the pilasters and monumental arched windows. The 1930 addition also included infill of a basement and two stories, to the line of the then-existing Redwood Street.

The interior of the California State Building consists primarily of offices arranged along double-loaded corridors. Significant public spaces include lobbies, corridors and staircases (see Figure 36.a). Lobby finishes include terrazzo floors and baseboards and polychromatic painted ornamental plaster ceilings. Walls are plaster, except at the first floor lobby, which has terrazzo-paneled walls in an ashlar block pattern. Corridors include terrazzo floors (covered with linoleum in many places), black terrazzo bases, glazed wood doors, clerestory windows, and simple stained wood trim. There are two sets of staircases: the major public staircases that are located in a main circulation core at the center of the building, and two staircases, identical to each other, at east and west ends. The main public staircases include cast-iron risers, stringers, newel posts and balustrades, with terrazzo treads, landings, baseboards and stringers. The flanking staircases provide secondary access and are concrete with cast-iron balusters and newel posts. Finishes in the stairwells include ornamental plaster ceilings and terrazzo wall panels. The Supreme Court on the fourth floor was once the most elaborate public space, with a large mural by Arthur Mathews above the judges' bench, a decorative skylight dome, ebony furnishings, and coffered ceiling. This room was extensively remodeled in 1951, including removal of the mural. Portions of the original wall finishes and the original dome may survive beneath the modern finishes.

Spaces considered very significant include the Governor's Suite on the second floor (see Figure 36.b) and the Chief Justice's Suite on the fourth floor.[9] These suites contain paneled walls, wood or linoleum floors, and ornamental plaster ceilings. Judges' suites on the fourth floor, and standard offices throughout the building, also retain substantial amounts of historic finishes.



a. Typical Main Corridor-
California State Building



b. Governor's Suite-California State Building

SOURCE: Carey & Co.

Figure 6
Photographs of Ste

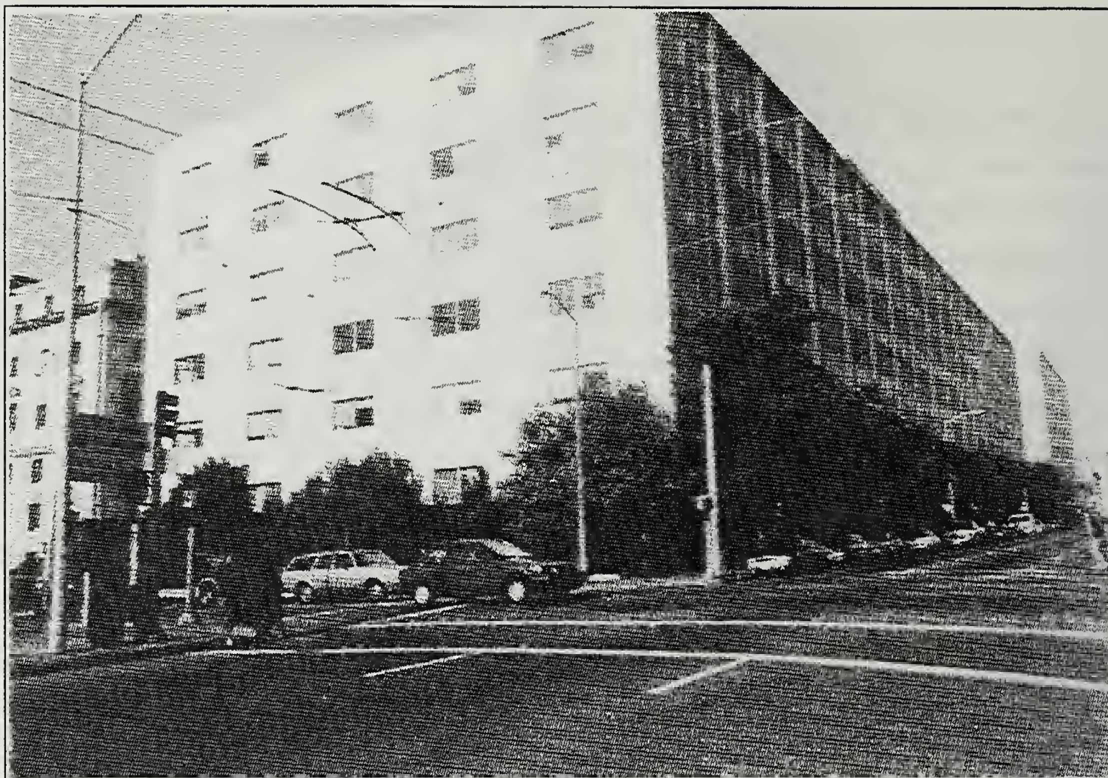
With the construction of the adjoining Annex, beginning in 1956, connecting structures and transitional spaces between the two buildings were created. In some cases, historic spaces were altered to create these transitional spaces. The ground-floor lobby floor was redone in 1956 with new terrazzo to match that in the Annex. Flush green marble paneling lines the walls in the transitional area north of the elevators, matching the marble in the lobby of the Annex. Central transitional spaces also occur at the second and third floors. These are simply finished with vinyl composition tile floors and gypsum board walls and ceilings. At the exterior wall, window openings where the buildings abutted were infilled or reduced in size. Granite cladding remains in place, but projecting ornament was removed.

The 1989 Loma Prieta earthquake damaged the California State Building in a manner consistent with the other historic Civic Center buildings. The primary damage occurred at the stairwells in the form of cracked plaster and hollow clay tile walls. In addition, some modern fluorescent lighting fixtures fell. After the earthquake, the State made the decision to vacate the building and moved its offices elsewhere. In particular, the Supreme Court and Appellate Court moved to Marathon Plaza at Second and Folsom Streets in San Francisco.

The Annex

The Annex, completed in 1957, is a concrete-frame building clad with mosaic ceramic tile and ceramic veneer panels. It was designed by the State of California Department of Public Works. The building is essentially rectangular, extending back at the center and at both ends of the rear (south) elevation to connections with the California State Building. At the time the State developed the Annex, it acquired the right-of-way of Redwood Street between Larkin and Polk. That area became the service driveway for the two state buildings. The building is seven stories tall with a full basement and partial eighth and ninth floors devoted to equipment and storage rooms.

The main Golden Gate Avenue facade is a grid set upon a flush black ceramic veneer base. Heavy verticals of green ceramic veneer-clad concrete columns divide the facade into 17 bays (see Figure 37.a). Thinner metal trim strips sub-divide each bay into four strips. Windows set in aluminum frames run the full width of each bay, alternating with blue and green mosaic tile-clad spandrel panels. The building entry, centered at the base of this facade, consists of polished red granite panels set around glazed aluminum doors.



a. View of Annex from Northeast Corner of Golden Gate Avenue and Larkin Street

b. View of California State Building and Annex from McAllister Street East of Larkin Street

SOURCE: Carey & Co.

Figure 7

Photographs of Ste

Both the Polk and the Larkin elevations have green ceramic veneer-clad walls over a black veneer-clad base. Windows here are square, paired to form horizontal rectangles. Linking passageways to the California State Building are set back from these side walls, and are raised on columns to create entryways into the service courts beyond (see Figure 37.b., p. 98). Street elevations of these passages are clad with corrugated aluminum siding, with one square window at each floor. The south, rear, facade is a transitional facade with three different treatments, and identical east and west ends. The end bay is similar to the front elevation. Next, trapezoidal openings at each floor indicate exit stair landing locations. Walls facing the service courtyards are plain green-painted concrete.

The interior consists primarily of simply finished office floors. The most elaborate spaces in the building are the connecting lobbies on the first and second stories. These spaces are lined with green flush marble paneling with terrazzo flooring. A monumental open staircase, with a distinctive aluminum handrail assembly, connects these lobbies. Above this staircase is an elaborate, amber glass and mirror star-shaped pendant fixture set into a green, scalloped suspended ceiling. Both lobbies connect with the California State Building, and on the lower floor, the finishes continue into the State Building, as noted above.

Archaeological Resources

In its natural setting, the project site was situated on an alluvial flat, at elevations ranging from 25 to 45 ft. above mean sea level. The area was surrounded on all sides by sand dunes. The sandy soils, both on the flatlands and in the hills, supported a sparse covering of vegetation, mainly grasses, scrub brush, and occasional stands of oak trees.

The archeological record shows three prehistoric sites within one mile of the project area. Two are shell midden sites and one is a human burial found 75 ft. below the present land surface. Also, a site occupied near the time of Euroamerican contact is in the vicinity of the project site. These documented sites, along with similarities in environmental setting, indicate the possibility of prehistoric sites within the project area.[10]

During the Spanish and Mexican Periods (1776-1845), it is unlikely that there was any activity that would have regularly brought anyone to the project site or its immediate vicinity, as Mission Dolores and the Presidio, the two principal centers of activity, were located some distance from

the site. The main access road to the mission from downtown (the Portsmouth Square area) was a plank road along the present-day Mission Street.

The project site is adjacent to San Francisco's first official public cemetery established in 1850.[11] Yerba Buena Cemetery was a large triangular parcel bounded by the present Market, McAllister, and Larkin Streets.[12] Its main access was primarily a meandering path extending from Turk Street. A fork extended across the southern half of the project site diagonally from the northeast to the southwest. By the mid-1860s this cemetery was moved to Lone Mountain, and the area became a public park, and then in 1870 the site for the construction of City Hall and other public buildings.

By the late 1850s, a few scattered structures stood on the project site.[13] By 1878, the present-day street grid was in place, and there were approximately 10-20 small scattered structures.[14] However, this area of the city was still at the edge of dense development. To the west were cemeteries, scattered farms, Golden Gate Park, and barren hills.

By 1890, about 50 percent of the site was covered with frame dwellings, stores, and small commercial establishments, with the concentration of buildings on McAllister Street. By 1900, structures covered approximately 90 percent of the project site.[15] The majority of buildings were small one or two-story frame structures, many of them dwellings, with a few brick commercial and light manufacturing buildings interspersed throughout. The most prominent structure was the five-story brick Supreme Court Building, built between 1888 and 1899, at the corner of McAllister and Larkin Streets.[16]

The 1906 Earthquake and Fire devastated the entire area, but rebuilding occurred rapidly, especially at the northern half of the project site. Largely rebuilt by 1913, this block consisted of small-scale commercial brick structures with stores, hotels, small businesses, and automobile-related concerns.[17] These small buildings remained in place with minimal alteration until their demolition in 1957 for the State Building Annex. The southern half of the project site remained largely undeveloped after the earthquake until the construction of the California State Building in 1922-23.

IMPACTS AND MITIGATION

Significance Criteria

Historic Architectural Resources

A project that would alter a contributory building of a National Register District in a manner that would not conform to the Secretary of the Interior's Standards for Rehabilitation, could lead to a finding by the State Historic Preservation Officer that the building would no longer be considered contributory. New construction within the proposed local Historic District would be reviewed for compatibility with the other resources of the district. A project that was substantially incompatible would affect the district's continued designation. Therefore, a project that would create a substantial adverse effect on a designated historic or architectural resource or historic district would have a significant environmental effect.

Archaeological Resources

For archaeological resources, a project that would disturb or remove, prior to scientific study, prehistoric or historic artifacts at the site would have a significant environmental effect.

Impacts

Approach to Renovation

The California State Building would undergo architectural and structural renovations. Architectural renovation would include the rehabilitation of the building's exterior historic facade, the recreation of portions oi the roof in blue-gray slate tiles to match the original exterior specifications and restoration and/or replacement of the historically significant original components in the spirit of the original design. Other exterior renovation would include repair or recasting of portions of the terra-cotta "cheneau" or gutter at the cornice line; repair or replacement of damaged granite facing; repair or replacement of damaged decorative plaster ceilings in the entrance loggia; and matching to the original granite-colored specifications of stucco surfaces over new shear walls on the north facades. As part of interior renovations, the Supreme Court Room would be restored based upon its original design, including the recreation of the skylit, truncated-dome ceiling. The Arthur Mathews mural formerly in place in the Supreme Court Room has not been located. The project design would provide a glass clerestory opening to the Public Room in the New State Office Building, until the mural is found.

the site. The main access road to the mission from downtown (the Portsmouth Square area) was a plank road along the present-day Mission Street.

The project site is adjacent to San Francisco's first official public cemetery established in 1850.[11] Yerba Buena Cemetery was a large triangular parcel bounded by the present Market, McAllister, and Larkin Streets.[12] Its main access was primarily a meandering path extending from Turk Street. A fork extended across the southern half of the project site diagonally from the northeast to the southwest. By the mid-1860s this cemetery was moved to Lone Mountain, and the area became a public park, and then in 1870 the site for the construction of City Hall and other public buildings.

By the late 1850s, a few scattered structures stood on the project site.[13] By 1878, the present-day street grid was in place, and there were approximately 10-20 small scattered structures.[14] However, this area of the city was still at the edge of dense development. To the west were cemeteries, scattered farms, Golden Gate Park, and barren hills.

By 1890, about 50 percent of the site was covered with frame dwellings, stores, and small commercial establishments, with the concentration of buildings on McAllister Street. By 1900, structures covered approximately 90 percent of the project site.[15] The majority of buildings were small one or two-story frame structures, many of them dwellings, with a few brick commercial and light manufacturing buildings interspersed throughout. The most prominent structure was the five-story brick Supreme Court Building, built between 1888 and 1899, at the corner of McAllister and Larkin Streets.[16]

The 1906 Earthquake and Fire devastated the entire area, but rebuilding occurred rapidly, especially at the northern half of the project site. Largely rebuilt by 1913, this block consisted of small-scale commercial brick structures with stores, hotels, small businesses, and automobile-related concerns.[17] These small buildings remained in place with minimal alteration until their demolition in 1957 for the State Building Annex. The southern half of the project site remained largely undeveloped after the earthquake until the construction of the California State Building in 1922-23.

IMPACTS AND MITIGATION

Significance Criteria

Historic Architectural Resources

A project that would alter a contributory building of a National Register District in a manner that would not conform to the Secretary of the Interior's Standards for Rehabilitation, could lead to a finding by the State Historic Preservation Officer that the building would no longer be considered contributory. New construction within the proposed local Historic District would be reviewed for compatibility with the other resources of the district. A project that was substantially incompatible would affect the district's continued designation. Therefore, a project that would create a substantial adverse effect on a designated historic or architectural resource or historic district would have a significant environmental effect.

Archaeological Resources

For archaeological resources, a project that would disturb or remove, prior to scientific study, prehistoric or historic artifacts at the site would have a significant environmental effect.

Impacts

Approach to Renovation

The California State Building would undergo architectural and structural renovations. Architectural renovation would include the rehabilitation of the building's exterior historic facade, the recreation of portions ot the roof in blue-gray slate tiles to match the original exterior specifications and restoration and/or replacement of the historically significant original components in the spirit of the original design. Other exterior renovation would include repair or recasting of portions of the terra-cotta "cheneau" or gutter at the cornice line; repair or replacement of damaged granite facing; repair or replacement of damaged decorative plaster ceilings in the entrance loggia; and matching to the original granite-colored specifications of stucco surfaces over new shear walls on the north facades. As part of interior renovations, the Supreme Court Room would be restored based upon its original design, including the recreation of the skylit, truncated-dome ceiling. The Arthur Mathews mural formerly in place in the Supreme Court Room has not been located. The project design would provide a glass clerestory opening to the Public Room in the New State Office Building, until the mural is found.

The proposed retrofit of the California State Building would meet the seismic performance goals in "Policy on Acceptable Levels of Earthquake Risk in State Buildings" and would meet the same standards as the New State Office Building (see Section III.I, Geology and Soils). The State selected this performance level for the project to assure a high degree of life safety, to protect the investment made to rehabilitate the California State Building, and to be able to reoccupy the building within days to months following an earthquake. That standard is proposed in the Design-Build Guidelines for the project as a whole, which note that:

> "Long life span, changing occupancies and life cycle costing considerations are characteristics of State buildings of this stature. Structural systems capable of accommodating these characteristics are necessary to provide a successful project. Due to the geographic location of the building site, seismic activity is inevitable during the life span of the building. Innovative yet conservative design of structural systems is of primary importance to insure continued integrity of the building and its components."

To implement those goals, the project would use a fixed-base shear-wall system. The major structural components would be new shear walls behind the existing concrete, stucco-faced walls of the secondary facades facing former Redwood Street and the east and west walls of the central wing, with existing decorative moldings to be removed and returned in place. Some existing exterior windows in the secondary facades would be removed, their frames reconstructed, and the original openings closed. (If severe deterioration has occurred on the secondary facade, the existing walls may be demolished and replaced. Exterior decorative material would be salvaged and reused.) Reinforced concrete shear walls would also be applied behind primary facades (fronting Polk, McAllister and Larkin Streets) by removing existing interior wall surfaces. New shear and reinforced existing walls would thus encompass the perimeter of the California State Building, except for the east wall of the west wing, the west wall of the east wing, and the north walls of the main building facing the courtyards. Hollow-clay tile walls surround the main stairway; life-safety considerations in an exit area would require strengthening of those walls. The project would replace those walls and certain other interior walls with new concrete shear walls.

The proposed shear-wall installation would require a four-foot-wide work area within the building, adjacent to the perimeter. Where interior walls intersect the perimeter, existing wall and ceiling surface materials would be removed during construction up to a similar depth. The project would re-use wood molding, paneling or cabinet work. Original flat plaster walls and ceilings would be replaced with gypsum board and a matching plaster surface, where needed. The seismic work could affect interior dimensions of some rooms and, therefore, re-installation

of moldings or paneling could require trimming dimensions of salvaged material. The proposed wall cross-section appears to indicate that the interior wall thickness would exceed the existing dimension, resulting in changes to window profiles and reworking of salvaged materials prior to reinstallation. The Design-Build team proposes to maintain the existing wall profiles to the extent feasible.[17] Other seismic work would include strengthening of floor slabs with new "collector" beams connected to the new shear walls, and foundation strengthening.

The analysis of effects on architectural resources presented below reflects the information and level of detail in the Design Proposal, State of California Civic Center Complex, San Francisco, prepared by HSH, the selected Design-Build team. Further design development is expected as part of the project with the intention of meeting the Secretary of the Interior's Standards for rehabilitation of historic structures. The impacts analysis below uses the term "could" where further design development would clarify the project effect on that element of the California State Buildings. Where the project as proposed would explicitly affect an element of the building, the term "would" is used.

Impact E.1: Based on information in the Design Proposal, integrating structural upgrades, as currently proposed with the project, into the California State Building could have a substantial impact on the historic resource. The proposed project would adversely affect the Governor's Suite, Chief Justice's Suite, and other Very Significant or Significant spaces identified in the California State Building. (Potentially Significant)

Retrofitting the California State Building to meet the earthquake performance objectives established in the design-build program, as currently proposed by the project, could alter or destroy historic finishes and spatial configurations. In the California State Building, the proposed seismic retrofit would have an adverse impact on ornamental and flat plaster ceilings and walls, staircases, and original flooring (see Table 3 for a complete listing of significant building components).

The proposed project would create new shear walls on certain exterior walls of the California State Building, as described above. At those exterior walls, one interior layer of brick and all interior finishes would be removed as well as those portions of the interior partitions, ceilings, and floors that are adjacent to or abutting the walls up to four ft. Removed flat plaster would be replaced with gypsum board, with a floated finish to match existing surfaces. Decorative finishes would be removed, stored, and reinstalled; some dimensional changes could occur due to changes in wall thicknesses, and new spaces for mechanical, electrical, or structural systems.

The proposed approach would place ducts against the inside of the existing interior profile of perimeter walls, except below window sills. The proposed wall cross-section appears to indicate that the interior wall thickness would exceed the existing dimension, resulting in changes to window profiles and reworking of salvaged materials prior to reinstallation. The Design-Build team proposes to maintain the existing wall profiles to the extent feasible.

The design/build program required the preservation and restoration of some of the California State Building's most architecturally and historically significant spaces. The Design-Build Guidelines, Volume II, p. 33, incorporates the Building Evaluation Report (BER) by reference, and states that the report "should be used to guide decisions about rehabilitation, renovation, tenant use of the building, and required seismic strengthening." Table 4 compares findings and ratings of interior features in the BER to the proposed program. The majority of the building's architecturally and historically significant spaces, including lobbies, corridors, staircases, and many offices, were not directly addressed by the Design Proposal or would be adversely affected, as noted in Table 4. Table 4 lists "Very Significant" or "Significant" interior spaces or other features of the California State Building, as noted in the Building Evaluation Report and Table 3, and the effects of the project as defined in the Design Proposal on those features. "Contributing" spaces or elements listed in Table 4 are not cited in this analysis of potential substantial adverse effects of the project, although some elements, such as service corridors, include both "Significant" and "Contributing" areas. That is, this EIR considers only effects on Very Significant or Significant features in conclusion of substantial adverse effects on the California State Building. The shear-wall retrofit along the McAllister facade of the building could adversely affect the interior of the Governor's Suite, Chief Justice's Suites and other Judge's Suites. Failure to retain, renovate and preserve these Very Significant and Significant spaces would have a substantial adverse impact on the building's historic character and integrity, and would not meet the Secretary of the Interior's Standards, particularly numbers 2 and 5, as follows:

"2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided."

"5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved."

TABLE 4: PROJECT EFFECTS ON INTERIOR FEATURES OF THE CALIFORNIA STATE BUILDING

Feature	Design Proposal's Effect on Features
Entry/Lobby Spaces (Very Significant)	Parts of ornamental plaster ceilings would be removed, to allow installation of new structural elements along with dismantling of terrazzo wall and base elements, thus exposing the elements to breakage. Where removal would not possible, molds would be taken and new cast plaster units reinstalled. The proposed project includes placing some doors from lobby to main corridor on hold opens to meet fire-safety standards; the original configuration included closed doors. Doors leading to Judge's Suites would remain closed for security reason. The proposed project would replace flat plaster areas with gypsum board with a floated finish. As built, each floor lobby and connecting corridors were configured in a specific dimensions related to that floor's occupancy. On the following floors, the proposed design would relocate the transition between Lobby and Corridors: Floor 2: Very Significant Lobby unchanged; door in Significant Corridor moved towards lobby about 12 ft., for security. Floor 3: Lobby unchanged; door in Corridor moved towards lobby about 12 ft., for security. Floor 4: Demolish portion of south wall to main corridor; enlarge lobby to include some corridor areas, break the original main corridor into two spaces. Floor 5: Reduce lobby/enlarge main corridors on both sides. Revise but retain enclosure walls around originally open main stairs. Floor 6: Revise but retain enclosure walls around originally open main stairs. These proposed lobby configurations would result in modifications to existing original finishes such as terrazzo flooring.

TABLE 4: PROJECT EFFECTS ON INTERIOR FEATURES OF THE CALIFORNIA STATE BUILDING (Continued)

Feature	Design Proposal's Effect on Features
Main Corridors (Significant) Service Corridors (Significant or Contributing) *(Continued)*	The proposed design would reconstruct a previously demolished Third Floor corridor to approximately its original configuration. Where existing finishes and elements are retained, the proposed design would include rehabilitation of these items.
Main Corridors (Significant) Service Corridors (Significant or Contributing)	The proposed design would alter the Main and Service Corridors, where they historically have intersected in a 90-degree plan arrangement. The proposed design would demolish half the Service Corridor walls, followed by reconstruction incorporating a new shear wall. The resulting thickened wall would affect the wall profiles on either or both the corridor and office sides. The proposed approach includes relocating the majority of the existing doors on the Service Corridor walls. Except for Level 6, these are Contributing or Non-Contributing Elements. The proposed design would add new doors mid-way along both Main and Service Corridors, which bisect original straight runs of corridors. As noted above, the proposed design would alter the original wall locations separating the Main Corridors and Lobbies. The proposed approach would retain existing transoms between corridors and offices.
Primary Staircases (Very Significant)	The proposed design would remove non-contributing modern partitions to restore the original spatial relationship between Lobbies and Stairs, at Floors 1 through 4. Staircase walls would be demolished for construction of new shear walls of the same thickness. Original plaster would be replaced by gypsum board with a floated finish; terrazzo paneling would be replaced.

TABLE 4: PROJECT EFFECTS ON INTERIOR FEATURES OF THE CALIFORNIA STATE BUILDING (Continued)

Feature	Design Proposal's Effect on Features
Primary Staircases (Very Significant) *(Continued)*	The proposed design would retain non-contributing enclosure walls around Main Stairs at Floors 5 and 6. The original lobby and stairs on these floors were not enclosed.
Supreme Courtroom (Space: Non-contributing, Surviving historic fragments: Very Significant)	The proposed design would restore this space, with unobtrusive alterations to accommodate modern court functions. The proposed approach suggests installation of a window in lieu of the missing Arthur Mathews mural, if the mural cannot be found and reinstalled.
Appellate Courtroom (Space: Contributing, Surviving historic fragments: Significant)	The status of the Appellate Courtroom was not addressed in the proposed design .
Very Special Offices (Very Significant and Significant)	The proposed design would construct new shear walls and collectors that could substantially affect all of these spaces. The Governor's Suite could be altered following demolition and construction of the wall and ceiling finishes along the Main Facade. Depending on the amount of increased wall thickness, elements such as interior sliding wood windows and wood paneling could require substantial alteration to fit the new dimensions of the room. Cast ornamental plaster on the ceiling, including areas with original glazed finish, would be demolished during construction. Demolished flat plaster would be replaced with gypsum board. The final dimensions of the room might be altered to accommodate the shear wall. Effects on the Chief Justice's Suite and the Attorney General's Suite would be similar.

TABLE 4: PROJECT EFFECTS ON INTERIOR FEATURES OF THE CALIFORNIA STATE BUILDING (Continued)

Feature	Design Proposal's Effect on Features
Judges' Suites (Significant) *(Continued)*	The Judge's Suites could be altered by demolition of wall, floor and ceiling finishes along the Main Facade. Depending on the amount of increased wall thickness, elements such as wood cabinetry could require substantial alteration to fit the new dimensions of the room. Demolished flat plaster walls and ceilings would be replaced with gypsum board. The final dimensions of the room would be altered to reduce the width by about one ft.
Original Public Restrooms (Significant)	The proposed design would retain both remaining original Public Restrooms, on the fourth floor, with alterations to accommodate disabled access.
Original Private Restrooms (Significant)	Twelve original private restrooms remain in the building. The proposed design would retain 10 Private Restrooms on the perimeter of the fourth floor; however, in light of their small size and the potential increased thickness of shear walls that impact these spaces, the continued utility of these spaces would not be assured. In addition, the proposed design would require that approximately a four-ft. wide strip of demolition would occur along the Main Facades. The Private Restrooms, which are about five-ft. deep, could be largely destroyed for construction access for new shear wall elements. A proposed approach to reconstructing demolished areas of the Private Restrooms was not specified.
Vault (Space: Non-contributing, Door: Significant)	The status of the Vault was not addressed in the proposed project.

SOURCE: Carey & Co.

Impact E.2: The project would renovate or restore historic features of the California State Building, including exterior elements such as the slate roof in the original design, and the previously-altered Supreme Court Room. This would be considered a beneficial effect of the proposed project. (Not Significant)

As described above, "Approach to Renovation," the project would include the rehabilitation of the building's exterior historic facade, with re-creation of portions of the roof in blue-gray slate tiles to match the original exterior specifications; repair or recast of portions of the terra-cotta "cheneau" or gutter at the cornice line; repair or replacement of damaged granite facing; repair or replacement of damaged decorative plaster ceilings in the entrance loggia; and matching to the original granite-colored specifications of stucco surfaces over new shear walls on the north facades. As part of interior renovations, the Supreme Court Room would be restored based upon its original design, including the re-creation of the skylit, truncated-dome ceiling. The Court Room on the fourth floor was once the most elaborate public space, with a large mural by Arthur Mathews above the judges' bench, a decorative skylight dome, ebony furnishings, and coffered ceiling. This room was extensively remodeled in 1951, including removal of the mural. Portions of the original wall finishes and the original dome may survive beneath the modern finishes. The mural formerly in place has not been located. The project design would provide a glass clerestory opening to the Public Room in the New State Office Building, until the mural is found.

These would be beneficial effects on architectural resources.

Impact E.3: Integrating life safety, access, and environmental upgrades into the California State Building, as currently proposed by the project, would have a substantial impact on the historic resources. (Potentially Significant)

Retrofitting an historic building to meet current codes would result in altering or destroying some original historic finishes and could result in altered spatial configurations. In the California State Building, the proposed mechanical, electrical, life safety and Americans with Disabilities Act (ADA) retrofits could have a substantial adverse impact on clerestory windows, ornamental and flat plaster ceilings, linoleum and terrazzo floor finishes, staircases, and original mechanical and electrical soffits (see Table 3 for a complete listing of building components). Decorative finishes would be removed and re-installed, with possible reworking of dimensions, as described in Impact E.1, p. 103.

Much of this impact would result from work proposed for installation of new heating, air conditioning, and ventilation ducts and equipment. Meeting ADA requirements would be

expected to have a adverse impact on the existing historic components of the California State Building. The design-build process would address the level of detail of ADA compliance during later design development phases. Potential effects of ADA work on building components would include providing access to the building, which is elevated four to five ft. above the sidewalk at McAllister Street, with a ramp or lift, either of which could have an adverse impact on the historic character of the building. In the interior, retrofit, removal and replacement, physical and design modifications to meet ADA requirements could have an adverse impact on the following significant components: doors-existing door widths could be inadequate in width; original hardware-knobs may have to be replaced with levers or retrofitted; original restrooms-may not accommodate wheelchairs.

Impact E.4: Construction activities at the California State Building could adversely affect this building. (Potentially Significant)

Construction activities associated with the rehabilitation of the California State Building has the potential for adverse impacts. During construction, pre-existing damage or deterioration could be exacerbated and new damage could occur. The location of temporary staging for the rehabilitation of the California State Building could have a temporary impact upon the building if the staging area is in proximity to this structure. This impact could cause damage through hitting, bumping, or coming in contact with the building's exterior surfaces by mechanical equipment or construction materials.

Impact E.5: Construction of the proposed project has the potential to damage historic buildings adjacent to the proposed project. (Potentially Significant)

Historic buildings within one block of the project include the Civic Center Powerhouse, the Old Main Library, and City Hall. Construction of the proposed project has the potential for creating vibrations that could disturb finishes and foundations. This impact could be in the form of impact damage from construction equipment; pile-driving is not proposed with the project (see Section III.G). Heavy equipment from the project, especially for the demolition of the Annex, has the potential for causing impact damage to adjacent historic structures, primarily the Powerhouse. Depending upon the depth of excavations for the New State Office Building, foundations might also be undermined as noted in Section III.I, Geology and Soils, Impact E.2. Finally, the location of temporary staging for the proposed project could have a temporary impact upon the surrounding historic buildings if the staging area is in proximity to these structures.

Impact E.6: The demolition of the Annex would result in a loss of one of a grouping of three public buildings from the late 1950s. While none of these buildings is currently recognized as historically or architecturally significant, they may have the potential of comprising a future historic district. (Not Significant)

Nearly 40 years old, the Annex is one of three public buildings in the vicinity dating from the late 1950s. The other two are the Phillip Burton Federal Building, directly across the street at 450 Golden Gate Avenue, and the now-vacant State Office Building at 525 Golden Gate Avenue. These three buildings are part of a post World War II Civic Center expansion responding to the need for more public office space. Both State buildings were designed to complement the Civic Center in massing and height, but using a modernist or International-Style vocabulary. The Federal Office Building is taller, but relates to the two State office buildings in its use of the International Style. Because this style is represented by many buildings in San Francisco, this impact is not considered significant.

Impact E.7: The New State Office Building would be of different scale and architectural character than the 80-ft.-tall California State Building, and other older Buildings in the Civic Center historic Districts. (Not Significant)

The New State Office Building portion of the project site is outside the boundary of the National Register districts; the proposed local Civic Center Historic District would include the entire project block. As discussed in Section III.B, Visual and Design Factors, p. 53, the project would retain the California State Building and add a new visual element to the north side of the Civic Center, transitional in scale and massing between the 80-ft. California State Building, other major Civic Center buildings, and the 300-ft. Federal Building. The New State Office Building would use materials similar to existing older buildings, in a contemporary design. The project would maintain the California State Building as the architectural element directly facing the north side of Civic Center Plaza, and would not directly change the urban design characteristics of the Beaux Arts-style buildings of the Civic Center core. The 300-ft.-tall City Hall dome would continue as a major element in the Civic Center. Maintenance of that character would respond to adopted or proposed City of San Francisco Master Plan policies for urban design in the Civic Center, and be consistent with the area's designation as a National Register Landmark District, National Register Historic District, and a local Civic Center Historic District (see Section III.A., Land Use Compatibility and Policy Conformity). Therefore, the project would not have a significant adverse effect on scale of development or the visual character of the Civic Center historic districts.

Impact E.8: The cumulative impact of the project plus other construction projects would not have an adverse impact on the Civic Center Historic Districts. (Not Significant)

Current and pending construction projects in the Historic Districts include the seismic upgrade of virtually all contributory buildings within the historic district (City Hall, Opera House, Veterans Memorial Building, Bill Graham Civic Auditorium, historic Main Library, Public Health Building), the demolition of the contributory 450 McAllister Street and its replacement with a new, larger Courts Building, the construction of a new Main Library building in Marshall Square, and the proposed adaptive reuse of the existing historic Main Library by the Asian Art Museum.

The seismic upgrade projects would have minimal impacts upon the building exteriors, and have been designed to avoid significant impacts to interior spaces. Therefore, these projects would have minimal or no significant impact upon the district. The demolition of 450 McAllister Street for the new San Francisco Courts Building is not expected to greatly alter the character of the district. The adaptive reuse of the historic Main Library has a greater potential for significant impact, since it may include substantial alteration to significant historic interior spaces. Finally, the new Main Library and the new Courts Building are both designed to maintain the established district height limit, and to have contemporary compatible exteriors. Therefore, these buildings are not expected to have a significant impact upon the district. Because the majority of construction projects within the Historic Districts would not have a significant impact, it is not anticipated that the cumulative impact of these plus the proposed project would have a significant impact on the district.

Impact E.9: Demolition of the Annex, excavation for two proposed exterior stairways at the east and west ends of the California State Building, and possible foundation work at the California State Building could have a substantial impact on prehistoric and historic archaeological remains. (Potentially Significant)

Demolition and excavation of the site for new construction could adversely affect and inadvertently remove prehistoric and historic cultural resources on the site that might lie buried beneath or beside the California State Building and the Annex. Available documentary evidence provided by the Northwest Information Center of the Historical Resources Information System at Sonoma State University suggests the possibility that prehistoric archaeological remains exist on the proposed project site or its immediate surroundings: three prehistoric sites are known to be within a one mile radius of the site, and all were located in similar surroundings as the proposed project site.

There is little likelihood of encountering pre-1850 Euroamerican relics on the project site. The Yerba Buena Cemetery, established in 1850, is known to have been situated directly adjacent to the project site. Burials from this cemetery could have extended onto at least the southern portion of the project site; some could have been left behind when graves were exhumed in 1870. Foundations and/or related cultural artifacts may also exist from the earlier structures built on the project site. This is especially likely since, after the 1906 earthquake, debris from destroyed buildings was often buried or built upon to expedite rebuilding.

Mitigation

Mitigation E.1: The project would accommodate seismic improvements in a manner that would limit disturbance to the historic character of the California State Building.

Mitigation E.1.a: The Secretary of the Interior's Standards and Guidelines for Rehabilitating Historic Buildings and the Recommendations in the Building Evaluation Report (BER) would be used to guide in the repair, rehabilitation, restoration, and reuse of the California State Building.

The recommendations in the BER are based on the Secretary of Interior Standards, and are divided into four sections: Exterior Recommendations, Interior Recommendations, Tenant Re-use Recommendations, and Structural Recommendations. Because the Building Evaluation Report did not survey the Basement or Floors 3 and 5 in detail, and because it was based on a visual inspection without any destructive testing or inspection, new or hidden conditions may be revealed during the design and construction process. This would require re-evaluation of the report's recommendations or a new evaluation of revealed conditions. The BER recommendations would be implemented in light of other program requirements. The project would follow the Secretary of the Interior's Standards; this would substantially reduce adverse impacts.

Consistent with the Secretary of the Interior's Standards for rehabilitation of historic buildings, the removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property would be avoided. Wherever feasible, design development would reduce the width of shear walls to be within that of existing wall space, or otherwise maintain the spatial relationships established within the building's period of significance. The Design-Build team has indicated that this mitigation would be feasible. Wood trim, moldings and paneling would be removed, protected and reinstalled. Ornamental plaster would be retained in place where disturbance is not required, salvaged and reinstalled as feasible where structural changes require

disturbance, and as a last resort, recast and installed, where salvaging is feasible. The flat plaster that is to be floated over gypsum board would match in color and texture the original flat plaster of adjacent walls that have been retained.

Mitigation E.1.b: The project could use the Minimal Acceptable Earthquake Performance Objectives in the Seismic Safety Commission's Policy on Acceptable Levels of Earthquake Risk in State Buildings.

The proposed project's structural design was based on the State's Design-Build guidelines, as noted above, which required a common level of seismic performance for both the New State Office Building and the renovated California State Building. The Seismic Safety Commission's Policy on Acceptable Levels of Earthquake Risk in State Buildings, Provisional Commentary for Seismic Retrofit, for rehabilitation of existing state buildings for occupancy categories Offices, Courts and Historic, Non-essential, includes Minimal Acceptable Earthquake Performance Objectives that could result in a structural design with substantially less impact on historic interior fabric associated with the proposal. Use of the Minimal Acceptable Earthquake Performance Objectives (MAEPO) would allow a reduced level of building protection that, while generally providing life safety, would not provide for the building to remain essentially intact following a major earthquake. These MAEPO allow a level of repairable damage to structural as well as non-structural compoment of such magnitude so as to require an extended period of repair during which time occupancy would not be possible. The Commentary notes that this level is acceptable if anticipated earthquake damage is repairable and the building also complies with the State Historical Building Code. This standard would not meet the project objectives of immediate re-occupancy following an earthquake, or protection of the State's substantial investment in the complex. In addition, it might not provide an equal level of protection to the occupants of both buildings. Finally, in the event of a major earthquake, the MAEPO would provide less protection of the historic fabric that is retained, or the restored elements of the buildings than the proposed standard. For these reasons, this mitigation has been rejected by the State.

An alternative structural design that could have potentially less impact on the interior historic fabric throughout the building, and would still meet project objectives for seismic response, is discussed in Chapter IV, Alternative Analysis, Alternative 4. As further discussed in Chapter IV, the alternative structural design would have other effects on cultural resources, including effects on the historic exterior facade.

Mitigation E.1.c: The California State Building would be photo-documented prior to construction, using Historic American Building Survey (HABS) standards for photography.

While the significance of the impact would not be changed by this measure, photo-documentation would permit accurate restoration or reconstruction of historically significant areas should these areas be disturbed. The historic preservation architect of the Design-Build team would confer with the HABS representative at the National Register Programs Division, Western Region, National Park Service, San Francisco, California, to determine the appropriate level of HABS documentation for a building within a National Historic Landmark District.

Mitigation E.1.d: A full Historic Structures Report (HSR) would be prepared prior to completion of the design development phase.

The Building Evaluation Report was not intended to be a complete Historic Structures Report, and did not include a full building survey. This complete building survey should be undertaken to identify all significant spaces, both to document them and to avoid their impact. The HSR would be forwarded to the SHPO to use as a guide in their review of proposed project plans. Implementation of this mitigation would minimize the impact to significant areas of the building.

Mitigation E.1.e: The Design-Build team would prepare documentation of Very Significant and Significant spaces to note 1) the original and existing configuration of these spaces, and 2) the proposed modifications.

The documentation would show the existing site, configuration, and layout of Very Significant and Significant spaces, and any proposed modifications there to. The SHPO would receive this documentation and would be consulted regarding the Secretary of the Interior's Standards.

Significance after Mitigation: **Less-than-significant**

Mitigation E.2: No Mitigation would be required.

Mitigation E.3: The project would incorporate measures to limit adverse effects on building space and components due to life-safety, access, or environmental retrofits, including adopted measures in Mitigation E.1. The project could also continue the configuration of the Main and Service Corridor, a 90-degree plan arrangement. The Design Proposal shows the walls at the intersection of the two corridors would be demolished, and reconstructed in an enlarged form, with a non-historic off-set plan configuration, which did not exist historically and does not reference the existing architecture of the building.

Mitigation E.3.a: The project would use the provisions for historic buildings in the Americans with Disabilities Act (ADA). These codes would also be used by the SHPO in their project review.

Provisions for retrofitting historic buildings contained in the ADA would be used to lessen the impact of disabled access requirements in the California State Building. Following these codes would lessen the impact of code-driven retrofits to the California State Building.

Mitigation E.3.b: Significant building components (see Table 3) that must be disturbed for the incorporation of code-driven, such as ADA requirements, retrofits would be salvaged and reused.

These materials would be stored and reinstalled following retrofits to the greatest extent possible. The Building Evaluation Report identifies historic components. Contract documents would contain specific requirements for protection, salvage, removal, transportation, storage, and reinstallation. Reinstallation would assure that no significant impacts remain. Provisions for retrofitting historic buildings contained in the Americans with Disabilities Act would be used to lessen the impact of disabled access requirements in the California State Building. Following these codes would lessen the impact of code-driven retrofits to the California State Building.

Mitigation E.3.c: The Design-Build team would prepare, during design development, a survey of interior finishes to determine what significant components affected by ADA requirement would remain in place, what would be destroyed, and what would be removed, stored, and reinstalled. These conditions would be indicated on drawings and submitted to the SHPO for review and approval. The SHPO would determine the specific requirements for the submittal of this information.

Significance after Mitigation E.3: **Less-than-Significant**

Mitigation E.4: A structural engineer would determine threshold levels of vibration and cracking prior to construction, and if these are met or exceeded, then construction techniques would be re-evaluated.

Those features, fixtures, and finishes that might be subject to damage during construction would be identified by a historic preservation architect and the documentation of the California State Building found in the Building Evaluation Report would be augmented with photographs and written descriptions of their existing condition. The historic preservation architect on the design build team would monitor the California State Building during construction of the proposed project. Instrumentation would be installed to measure vibration and monitor cracks. Construction specifications would contain specific sections addressing the contractor's responsibilities to protect the California State Building during construction. Employing this

mitigation measure would avoid significant impact caused by vibration. While some cracking to finish materials may still be allowed, this should only be superficial, easily repairable damage.

Significance After Mitigation: **Less-than-Significant**

Mitigation E.5: The project would incorporate measures to avoid damage to nearby historic resources.

Mitigation E.5.a: A structural engineer would determine threshold levels of vibration and cracking prior to construction, and if these are met or exceeded, then construction techniques should be re-evaluated.

The Civic Center Powerhouse would be monitored during construction of the proposed project. Instrumentation would be installed to measure vibration and monitor cracks. Employing this mitigation measure would avoid significant impact caused by vibration. While some cracking to finish materials may still occur, this should be limited to superficial, easily repairable damage.

Mitigation E.5.b: Features, fixtures, and finishes associated with the surrounding historic buildings that might be damaged during construction would be identified by a historic preservation architect and photographed; a written description of their existing condition also would be prepared.

The purpose of this documentation would be to record the existing condition of these buildings should any damage occur, and to identify any pre-existing damage. While this mitigation measure would not reduce the risk of significant impact to these buildings, it would make it possible to repair any damage that does occur to the pre-existing condition. Section III.I, Geology and Soils, Mitigation I.2, would include a final geotechnical report that would address excavation, underpinning and monitoring requirements to avoid damage to nearby buildings.

Mitigation E.5.c: Construction staging areas would be placed away from surrounding historic structures.

The staging area would be sufficiently removed from the historic buildings so that the buildings would not be endangered by construction equipment and materials. This mitigation measure would reduce the significance of this impact by placing staging-related activities and equipment away from surrounding historic buildings.

Significance After Mitigation E.5: **Less-than-Significant**

Mitigation E.6: No mitigation would be required.

Mitigation E.7: No mitigation would be required.

Mitigation E.8: No mitigation would be required.

Mitigation E.9.: The project sponsor would retain the services of a professional archaeologist or historic archaeologist, to monitor excavation activities at the site that may expose archaeological materials.

The archaeologist would be present at the time the basement of the Annex is being removed to monitor the area for subsurface archaeological resources. The archaeologist would conduct a preliminary field inspection after the basement is removed and prior to excavations for the proposed exterior stairways at the east and west ends of the California State Building, and prior to any proposed excavation or other work affecting its foundations: 1) to assess the amount and locations of visible ground-surface; 2) to determine the nature and extent of previous impacts to the project area; 3) to assess the nature and extent of potential impacts; and 4) to determine the appropriate level and method for identification of prehistoric, protohistoric, and historic cultural resources. The preliminary field inspection may find that enough visible and undisturbed soils remain in the project area to warrant a full survey, or that some form of subsurface testing is necessary, such as the excavation by auger, shovel, or backhoe units. The archaeologist would record observations in a permanent log.

The need for on-site monitoring of subsurface activities such as grading, excavation for footings, and trenching also would be determined by the archaeologist after the basement is removed and prior to excavations for the proposed exterior stairways at the east and west ends of the California State Building, and prior to any proposed excavation or other work affecting its foundations.

Should archaeological resources be found following commencement of excavation activities, the archaeologist would assess the significance of the find, and immediately report to OPDM's Senior Environmental Officer and the State Office of Historic Preservation (SHPO). Excavation or construction activities that might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendations, and retrieval of cultural resources. Upon receiving the advice of the archaeologist and SHPO, OPDM's Senior

Environmental Officer would recommend specific action to protect the resources, including an appropriate security program to prevent looting.

Should cultural resources be encountered during the project, the found materials and their context would not be disturbed until the archaeologist has evaluated the situation. Project personnel would be instructed not to collect cultural resources. Prehistoric resources include chert or obsidian flakes, projectile points, mortars and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone, brick or adobe foundations or walls; structures and remains with square nails; and refuse deposits such as old wells and privies. Identified cultural resources would be recorded on forms DPR 422 (archeological sites), DPR 523 (historic properties) or similar forms. Copies of these forms and any reports prepared according to these mitigation measures would be sent to the California Archeological Site Survey Office at Sonoma State University and the Environmental Review Officer, Department of City Planning, City and County of San Francisco.

While these mitigation measures would record and/or retrieve any below-ground cultural resources on the project site, they would not eliminate the impact to these resources.

Significance After Mitigation: **Less-than-Significant**

NOTES - Cultural Resources

1 Foundation for San Francisco's Architectural Heritage, *Splendid Survivors*, 1979, San Francisco: California Living Book, pp. 12-13.

2 David Gebhard, Eric Sandweiss, and Robert Winter, *Guide to Architecture in San Francisco and Northern California* (Salt Lake City: Peregrine Smith Books, 1985), p. 82.

3 National Register of Historic Places Inventory-Nomination Form for Civic Center Historic District, December 1974. National Register of Historic Places Inventory-Nomination Form for Civic Center National Historic Landmark District, November, 1974.

4 Carol Roland, California State Office of Historic Preservation in Sacramento, telephone conversation, July 7, 1994.

5 Assembly Bill No. 2881, Chapter 1075. An act to amend Sections 5020.1, 5020.4, 5024.5, 5024.6, and 21084 of ... the Public Resources Code, relating to historical resources. Amendments approved by the Governor September 27, 1992.

6 Joan Draper, *The San Francisco Civic Center: Architecture, Planning, and Politics* (Berkeley: University of California, 1979).

7 Carey & Co., *Building Evaluation Report: California State Building, San Francisco, California*, February 25, 1994.

8 Definitions of terms used in this paragraph:
Rustication: beveled or channeled joints between blocks of masonry, or a pattern to simulate masonry.
Belt Course: a horizontal band extending across a building's facade.
Balustrade: a series of balusters (small columns) supporting a rail.
Pilasters: shallow square-section engaged columns.

9 California Archaeological Services Report, Northwest Information Center, Sonoma State University, Rohnert Park, California. June 24, 1994. File No. 94-223.

10 Gladys Hansen, *San Francisco Almanac*, 1975, San Francisco: Chronicle Books, p.183.

11 1852 and 1857 Coast and Survey Maps. David Harris, with Eric Sandweiss, *Eadweard Muybridge and the Photographic Panorama of San Francisco, 1850-1880,* (Montreal, Canadian Centre for Architecture, 1993), pp.59-61.

12 1857 Coast and Survey Map and 1864 Bird's-Eye View Map. Ibid., pp. 68-69.

13 1878 Parson's Bird's-Eye View of San Francisco. Ibid., pp. 70-71.

14 Sanborn Fire Insurance Maps, 1885, 1899, 1905.

15 Patricia Welsh, *Thomas J. Welsh*, 1993, San Francisco: Patricia Welsh, self published, p. 54.

16 Sanborn Fire Insurance Map, 1913.

17 Art Thompson, HSH Design-Build, Inc., letter to Christal Waters, Office of Project Development and Management, October 24, 1994.

F. TRAFFIC, TRANSIT, PARKING AND CIRCULATION

SETTING

Roadway Network

The project site is located in the San Francisco Civic Center area, on the block bounded by Golden Gate Street to the north, Larkin Street to the east, McAllister Street to the south, and Polk Street to the west. The site vicinity is served by local streets and by portions of the regional freeway system.

Regional Highways

Freeway access is provided at on- and off-ramps less than one mile south of the project site. Access to the Peninsula via U.S. 101 southbound is provided from an on-ramp at 13th Street and South Van Ness Avenue (see Figure 1, p. 4). Freeway access to the East Bay via I-80 (Bay Bridge) is provided from an on-ramp to I-80 at Eighth and Bryant Streets. Access from the Peninsula via U.S. 101 is provided via an off-ramp at 13th and Otis Street. Access from the East Bay is provided via an I-80 off-ramp at Eighth and Harrison Streets. Traffic headed to and from the North Bay generally travels along Van Ness Avenue to Lombard Street (U.S. 101).

The 1989 Loma Prieta earthquake had notable effects on the regional highway system; repairs to most facilities have yet to be effected, with the exception of the Bay Bridge, where one span of the upper deck collapsed in the earthquake. Repairs were completed within one month, and operations on that bridge have returned to pre-earthquake patterns.

Within San Francisco, major damage to State Route 480 (the Embarcadero), the I-280 extension north of U.S. 101, and the U.S. 101 ramps between Fell and Turk Streets caused closure of these routes. The section of I-280 between Army and Fourth Streets was repaired and has reopened. A single lane in each direction on the section of I-280 between Army Street and U.S. 101 was reopened in April 1993 to allow traffic to connect to I-280 south of the U.S. 101 / I-280 interchange; there is still no connection between U.S. 101 and the northern portion of I-280. The northbound connector from U.S. 101 to I-280 is now closed, but is scheduled to be reopened by late 1994; the southbound connector from I-280 to U.S. 101 is expected to reopened by late 1995. The full repair of I-280 between Army Street and U.S. 101 is tentatively scheduled to be completed by the end of 1995.[1]

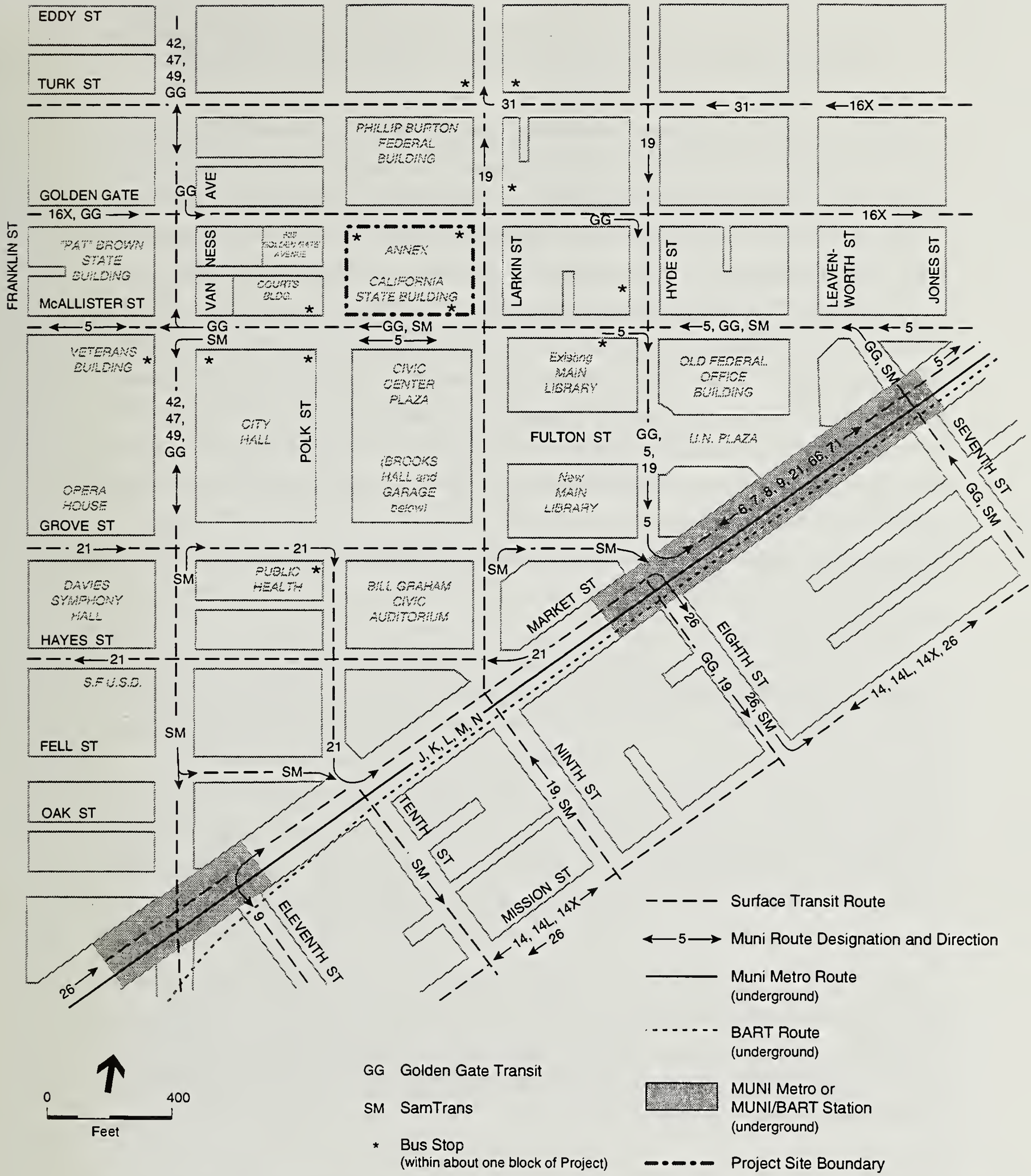
Demolition of the elevated Embarcadero Freeway was completed in October 1991. In addition, the "terminal separator structure" (the elevated connector between the Bay Bridge and the Embarcadero Freeway) has been demolished, as has the rest of the Embarcadero Freeway southwest of Steuart Street. Alternative replacements of the Bay Bridge terminal separator and the mid-Embarcadero freeway are currently under study by the City; design alternatives include possible replacement of the Main and Beale Street ramps and/or creation of other Bay Bridge on- and off-ramps, including a possible link to a surface-level roadway on The Embarcadero.[2]

Demolition of the portion of U.S. 101 (the Central Skyway), north of the Oak/Fell on- and off-ramps was completed in 1992. This resulted in the removal of the Gough/Turk Streets on-ramp and the Franklin Street / Golden Gate Avenue off-ramp. The City has commissioned a study of traffic in the area, with a report on the Central Freeway Areawide Traffic Study published in August 1994.[3] No preferred plans have been selected for changed access to the Central Freeway. The City is currently reviewing plans for Caltrans to perform retrofitting for seismic strengthening on the section of U.S. 101 between Mission Street and Fell Street. The San Francisco Transportation Authority will soon commence a preliminary study for the replacement of Doyle Drive, an elevated freeway structure which provides access to the Golden Gate Bridge.

Local Streets

See Figure 38, p. 123, for the street network surrounding the project site. The site area is served by several major vehicular thoroughfares, including Oak, Fell and Market Streets. Oak and Fell Streets provide access to the western portions of the City, while Market Street provides access to the downtown and the southeast areas of the City. In the vicinity of the site, McAllister Street, Van Ness Avenue, Market Street, and Golden Gate Avenue are designated in the *San Francisco Master Plan* as "Transit Preferential Streets." On these streets, priority is given to transit vehicles over autos during commute and business hours on weekdays, usually along curbside lanes.[4] Hyde, Larkin, Hayes, Fell, Eighth, Ninth, and Tenth Streets and Van Ness Avenue are designated as "Primary Vehicular Streets", which the *Master Plan* defines as "major routes for automobile and truck movements into and out of the Downtown area."

Grove, Polk, Larkin, and Market Streets are designated as Preferred Commute Bike Routes in the Transportation Element of the City's *Master Plan*. Only Grove Street (west of Polk) is currently posted as a bicycle route.



SOURCE: San Francisco Street & Transit Map, 1994;
SamTrans Bus Route Map, 1993;
Golden Gate Transit Bus & Ferry System Map, 1993

State Office Building EIR ■

Figure 38
Transit Routes in the Project Area

Golden Gate Avenue is one-way with three eastbound lanes. Market Street and McAllister Street have two travel lanes operating in each direction. (McAllister Street operates one-way with three westbound lanes east of Hyde Street.) Polk Street has two southbound lanes and one northbound lane north of Grove Street (with a third southbound lane between McAllister and Grove Streets), and operates one-way with three southbound lanes south of Grove Street. Ninth Street has four northbound lanes. Hyde Street is one-way with three southbound lanes; Eighth Street (the extension of Hyde Street south of Market Street) has four southbound lanes. Grove Street operates with one lane in each direction near Hyde Street and two lanes in each direction west of Larkin Street. Larkin Street has three lanes northbound south of Grove Street and north of McAllister Street, and two lanes northbound and one lane southbound in front of the Civic Center Plaza, between Grove and McAllister Streets; Ninth Street (the extension of Larkin Street south of Market Street) has four northbound lanes. Van Ness Avenue (and South Van Ness Avenue south of Market Street) has three travel lanes in each direction.

Traffic Conditions

Existing p.m. peak period counts were conducted at nine signalized intersections in the project vicinity.[5] Traffic operations at the nine study intersections were evaluated using a peak-hour level of service (LOS) analysis. This analysis provides a standardized means of rating an intersection's operating characteristics on the basis of traffic volumes, intersection capacity and delays. An LOS scale has been established from LOS A (little or no delay) to LOS F (lengthy delay); LOS D is considered the lowest acceptable level in San Francisco. As specified in the San Francisco Department of City Planning's *Guidelines for Environmental Review*, the intersections were analyzed using the Critical Movement Analysis methodology presented in the *Transportation Research Circular Number 212*.[6] Descriptions of criteria used for level of service determinations for signalized intersections are provided in Appendix C. All study intersections currently operate acceptably during the p.m. peak hour, with all but one study intersection operating at LOS C or better. The intersection of Market Street at Larkin/Ninth Street currently operates at LOS D.

Transit

The Civic Center area is well served by the San Francisco Municipal Railway (MUNI) and other regional transit operators. Figure 38 illustrates transit routes that serve the project site. Stops for approximately 20 MUNI bus and Metro lines are within walking distance of the project site.[7] The site is served by MUNI electric trolley and motor coach lines, providing radial service to and

from the downtown area. MUNI bus lines operate on Larkin, Hyde, Turk, McAllister, Market, Hayes, Eighth, and Ninth Streets and on Van Ness and Golden Gate Avenues in the project vicinity. The closest MUNI stops to the project site are on Larkin Street at Golden Gate Avenue, and on Hyde Street at McAllister Street, serving the 19-Polk; on McAllister Street at Polk and at Larkin, serving the 5-Fulton; on Turk Street at Larkin, and on Eddy Street at Polk and at Larkin, serving the 31-Balboa; on Golden Gate at Polk and Larkin, and on Turk at Polk, serving the 16AX/BX-Noriega Expresses; and on Van Ness Avenue at McAllister, serving the 42-Downtown Loop, 47-Van Ness, and 49-Van Ness-Mission. On Market Street, there are seven stops between Seventh and Tenth Streets serving seven MUNI lines. MUNI Metro light rail vehicle lines are accessible at the Civic Center Station, located at Eighth/Hyde and Market Streets, and at the Van Ness station, at Van Ness and Market.

Several regional transit operators also provide service to the project site. Regional transit service to and from the East Bay is provided by the Bay Area Rapid Transit District (BART), which stops at the Civic Center Station. BART also links Daly City and the southern areas of San Francisco with the Civic Center. AC Transit does not have any stops in the immediate vicinity of the project site; however, this carrier, which stops at the Transbay Terminal, can be reached by the Market Street lines or MUNI Metro lines.

SamTrans, the San Mateo County operator, provides transit service to the Peninsula, serving the Civic Center directly, with an inbound stop at the intersection of Grove, Market and Eighth/Hyde Streets and an outbound stop at McAllister and Hyde Streets. Five other SamTrans lines operate on Mission Street and stop within three to four blocks of the site.

CalTrain provides service to the Peninsula and San Jose. The CalTrain station, at Fourth and Townsend Streets, is accessible from the Civic Center via the MUNI 42-Downtown Loop on Van Ness Avenue or by taking a Market Street bus or Metro line to Fourth and Market Streets and then transferring to MUNI lines 30-Stockton or 45-Union/Stockton that serve the CalTrain Depot.

The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides a.m. and p.m. peak-period bus service from/to Marin and Sonoma Counties. The closest boarding stops are on McAllister Street at Van Ness Avenue, at Polk and at Hyde Street. Discharge stops are located on Golden Gate Avenue, at Polk and Hyde Streets. Golden Gate Transit provides ferry service to terminals in Larkspur and Sausalito from the Ferry Building,

and operates a shuttle service from the Ferry Building to the Civic Center area. Golden Gate Transit also operates a vanpool and club (subscription) bus program to areas not served by fixed routes.

The RIDES carpool program, operating as a nonprofit, publicly funded corporation, provides consulting and matching services to help establish Bay Area carpools and vanpools.

Parking

The project parking study area is a two-block radius bounded by Eddy Street to the north, Leavenworth Street to the east, Market Street to the southeast, Hayes Street to the south, and Franklin Street to the west. Parking within the study area consists of metered and unmetered on-street parking spaces, and publicly accessible off-street lots and garages. Most of the curbside parking is at least 85 percent occupied on an average weekday during the weekday peak hour parking occupancy (1:00 p.m. to 2:00 p.m.).[8] During major events at Civic Auditorium and at Brooks Hall, the underground facility beneath Civic Center Plaza, and on-street parking within one quarter-mile of the hall reaches saturation. On a typical weekday, the average for off-street parking lots and garages in the vicinity is approximately 80 percent occupied. All of the parking areas to the north of the project site were surface lots with the exception of one garage on Golden Gate Avenue between Franklin Street and Van Ness Avenue.

Pedestrian Activity

Pedestrian levels of service were calculated using the methodology presented in Pushkarev and Zupan's *Urban Space for Pedestrians*.[9] For pedestrian crosswalks, pedestrian flow rates, or the number of pedestrians passing a point per unit of time, are the basis for the flow regimen designation. The flow rate is calculated using the width of the crosswalk and the number of pedestrians using the crosswalk per peak 15-minute period. Qualitatively, the flow regimen indicates "the freedom to choose desired speeds and to bypass others." (See Appendix C, Table C-3, p. A-51, for an explanation of pedestrian flow rates and levels of service. Figure C-2, pp. A-52 and A-53, shows photographs of sidewalk conditions for each flow regimen.)

The main pedestrian entrances to the proposed project would be on Golden Gate Avenue and McAllister Street, with secondary access on Larkin Street and on Polk Street.

Table 8, pp. 136 and 137, summarizes existing pedestrian flow conditions in crosswalks near the site. Existing pedestrian volume counts were conducted during the midday and p.m. peak hours at McAllister Street / Van Ness Avenue (all four crosswalks), McAllister Street / Polk Street (west, east, and north crosswalks), and McAllister Street / Larkin Street (west and east crosswalks). Pedestrian flow regimens were calculated for both the midday peak hour and the p.m. peak hour. The midday peak hour was found to occur between 12:00 p.m. and 1:00 p.m. Highest pedestrian volumes occur in the midday peak. All of the crosswalks analyzed currently operate as open or unimpeded, indicating that pedestrians are able to walk with minimal conflicts with other pedestrians at these locations. While vehicular activity within the Civic Center is relatively heavy, the area's plazas and wide sidewalks encourage pedestrian activity among government buildings, art centers and the existing library.

IMPACTS AND MITIGATION

Significance Criteria

Project impacts would be considered to be significant if the project would add to cumulative passenger loadings on transit carriers that could reduce their Level of Service; generate parking demand that exceeds parking supply in the project area on an on-going basis (i.e., not during periodic event peak demand); would cause an intersection's p.m. peak-hour service level to degrade to worse than LOS D (i.e., to LOS E or F); cause pedestrian volumes on area crosswalks to reach "congested", or "jammed" conditions; or provide inadequate loading facilities that could cause regular, substantial, street blockages from truck or delivery vehicles.

Impacts

Impact F.1: The proposed project would increase traffic on the roadway network (at intersections and on freeways) in the project area. (Not Significant)

Travel Demand

On the basis of employment levels, the project would generate about 5,360 net new person trip-ends (pte) per day by employees and visitors (see description of the bases for travel demand estimates for employees and visitors on p. A-54, in Appendix C). Travel generated by employees and visitors associated with existing state offices on the project site (about 3,140 pte per day) has been subtracted from the total travel (about 8,500 pte per day) from the site to give

the net new travel from the project.[10] Although expressed on a person trip-end basis, the trip generation includes all travel to and from the project in automobiles, on public transit and other modes (i.e., walking, bicycles, taxis, etc.). Estimated travel demand (daily and p.m. peak hour) by trip type for the existing and proposed employment levels is shown in Table 5. Projected inbound and outbound p.m. peak-hour trips by mode expected to be generated by the project are shown in Table 6. The project would generate about 340 net new p.m. peak-hour vehicle trip-ends (vte); these vte would be a combination of drive-alone trips and rideshare trips.

Assignment to travel modes for the project have been made on the basis of various sources. Travel mode assignments for work (i.e., employee commute) trips were made using data from the 1993 *Caltrans Survey of State Employees*, for state agencies that are expected to be located in the project building.[11] The great majority of those agencies are currently located in San Francisco, some at the project site and some elsewhere in the City. Travel mode assignments for non-work (i.e., employee non-commute and visitor) trips were made on the basis of data in the San Francisco Department of City Planning's *Guidelines for Environmental Review: Transportation Impacts*, for the Van Ness Avenue corridor.[12] The actual modal split for travel generated by the project may vary from the average percentages used for this analysis. However, because the average modal split data reflect travel patterns for state employees working in the general project vicinity and for a corridor near to the project site, application of the average modal split data to project travel has been assumed to be sufficiently accurate for purposes of comparison.

Local Intersection Traffic

Nine signalized intersections in the project vicinity were studied to determine the effects of project-generated traffic.

1. Golden Gate Avenue and Van Ness Avenue
2. Golden Gate Avenue and Polk Street
3. Golden Gate Avenue and Larkin Street
4. McAllister Street and Van Ness Avenue
5. McAllister Street and Polk Street
6. McAllister Street and Larkin Street
7. Market Street and Van Ness / South Van Ness Avenues
8. Market Street and Larkin / Ninth Streets
9. Market Street and Hyde / Eighth Streets

TABLE 5: TRAVEL DEMAND (PERSON TRIPS) FOR EXISTING AND PROPOSED EMPLOYMENT AT THE PROJECT SITE /a/

Time Period	Existing	Total With Project	Net New
Daily	3,140	8,500	5,360
P.M. Peak Hour /b/	530	1,430	900

/a/ Travel demand is estimated using daily and p.m. peak-hour trip generation rates (trips per employee) derived from the 1993 *Caltrans Survey of State Employees* for employees of state agencies that are expected to be located in the project building. The great majority of those agencies are currently located in San Francisco, some at the project site and some elsewhere in the City. There are currently about 925 employees working at the project site (at the Annex); about 2,500 employees would work at the site with the proposed project.
/b/ The p.m. peak hour occurs during the two-hour period of 4:00 p.m. to 6:00 p.m.

SOURCE: Environmental Science Associates

TABLE 6: NET NEW TRAVEL DEMAND BY MODE PROJECTED TO BE GENERATED BY THE PROJECT (pte) /a/

	P.M. Peak Hour /b/	
Travel Mode	Inbound	Outbound
Drive Alone	35	265
Rideshare	10	85
Transit	20	375
Other	10	100
TOTAL	75	825

/a/ Net new person trip-ends (pte).
/b/ The p.m. peak hour occurs during the two-hour period of 4:00 p.m. to 6:00 p.m.

SOURCE: Environmental Science Associates, using data from the 1993 *Caltrans Survey of State Employees* for state agencies that are expected to be located in the project building, and in the San Francisco Department of City Planning's *Guidelines for Environmental Review: Transportation Impacts.*

Table 7 summarizes the volume-to-capacity ratios (v/c) and LOS at each study intersection for existing, existing-plus-project, and cumulative conditions (including background traffic growth associated with other development projects in the project vicinity, such as the proposed Federal Office Building at Market and Tenth Streets, and the under-construction New Main Library at Larkin and Fulton Streets, and the project). Existing traffic volumes are based on midweek counts conducted in 1994.[5] All study intersections currently operate acceptably during the p.m. peak hour, with all but one study intersection operating at LOS C or better. The intersection of Market Street at Larkin/Ninth Street currently operates at LOS C/D.

TABLE 7: EXISTING AND FUTURE P.M. PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS (V/C) AND LEVELS OF SERVICE (LOS) /a/

	Existing (1994) /b/		Existing Plus Project		Cumulative (2000) /c/	
Intersection	V/C	LOS	V/C	LOS	V/C	LOS
Golden Gate / Van Ness	0.69	B	0.71	B/C	0.76	C
Golden Gate / Polk	0.43	A	0.43	A	0.47	A
Golden Gate / Larkin	0.52	A	0.53	A	0.57	A
McAllister / Van Ness	0.70	B/C	0.75	C	0.82	D
McAllister / Polk	0.51	A	0.57	A	0.64	B
McAllister / Larkin	0.71	B/C	0.73	C	0.80	C/D
Market / Van Ness	0.75	C	0.75	C	0.79	C
Market / Larkin / Ninth	0.81	C/D	0.81	C/D	0.86	D
Market / Hyde / Eighth	0.68	B	0.72	C	0.76	C

/a/ LOS descriptions and relationship to v/c ratios are shown in Table C-2, p. A-50 of Appendix C.

/b/ Based on traffic counts conducted by Traffic Research Associates on Tuesday to Thursday, June 28-30, 1994, and by Wilbur Smith Associates in early 1994 for the Central Freeway Study, and for the EIR/EIS for the proposed Federal Office Building on Market Street at Tenth Street.

/c/ Cumulative conditions in the Year 2000 are based on a 5.7 percent growth factor for the period 1994 to 2000 (prorated from the City-assumed 15 percent growth in traffic between 1985 and 2000), plus net new traffic generated by the project and the New Main Library.

SOURCE: Environmental Science Associates

Freeway Corridor Analysis

The project would contribute to increases in traffic on the major freeways serving the Downtown & Vicinity. Traffic generated by the project itself would increase total traffic on major freeways during the p.m. peak hour by about one percent (to the East Bay) or less (to the Peninsula and North Bay). Such increases would not be measurable against the day-to-day fluctuations in traffic volumes. Because the Bay Bridge p.m. peak-hour eastbound traffic flow is functionally at capacity, the travel demand from the project would not be expected to increase the flows on the Bay Bridge in the peak hour; rather, the East Bay-bound auto traffic from the project would most likely compete with and delay existing users of the Bay Bridge into later portions of the peak period. This competition for access would occur at the on-ramps to the Bay Bridge and any displacement of existing users to later time periods would depend upon the time of arrival of project vehicles at the on-ramps. Some drivers would shift to carpools or transit as a result of cumulative displacement.

Impact F.2: The proposed project would increase ridership on local and regional transit facilities serving the project area. (Not Significant)

About 10 MUNI lines stop within one block of the project site; about 20 MUNI lines including the underground Metro lines, and BART, are within one-quarter mile walking distance. SamTrans and Golden Gate Transit also stop within one block of the site. Figure 38, p. 123, shows transit routes in the project area.

The transit impacts were assessed by regions - San Francisco, North Bay, East Bay, Peninsula. San Francisco was further divided into sectors. Transit screenlines, established for the *Mission Bay EIR* analysis, were used to describe the impacts on MUNI, rather than a line-by-line analysis. Individual MUNI routes were grouped on the basis of the location of their alignments and stops into the Northeast, Northwest, Southwest, and Southeast areas of San Francisco. Potential transit users were distributed to area transit lines based on projected residential locations for project employees and visitors, and split of transit ridership on transit service facilities (e.g., AC Transit versus BART between San Francisco and the East Bay) as presented in the *Mission Bay EIR*. Approximately 400 net new p.m. peak-hour transit trips would be generated by the project. This total include all transit operators serving the project site. MUNI and BART would receive the most new riders with about 34 percent (about 135 new riders) each. AC Transit would capture about 13 percent (about 50 new riders) of the new transit trips generated by the project. The remaining trips (about 80 new riders) would be shared among

Golden Gate Transit, CalTrain, and SamTrans. Addition of the project p.m. peak-hour MUNI riders (representing an increase of less than one percent in MUNI ridership) would not significantly alter peak-direction transit levels of service because the new riders would be dispersed among the many MUNI lines serving the project area.

Table C-1, Appendix C, p. A-45, provides descriptions of levels of service for bus transit. Figure C-1, pp. A-46 through A-48, shows photographic examples of p.m. peak-hour loading conditions on MUNI vehicles.

Addition of BART riders from the project to the existing BART ridership would not increase p.m. peak-hour Transbay or Westbay passenger loading ratios or change LOS. Existing BART peak-period and peak-hour transit ridership would be increased by less than one percent. A ridership increase of this magnitude would not be measurable against day-to-day fluctuations in transit ridership.

Based on the screenlines for MUNI as established in the *Mission Bay EIR*, by the year 2000, the ridership would generally be accommodated on MUNI. The Northwest screenline would experience some overcrowding during the p.m. peak hour. The load factor is projected to be 1.27 passengers per seat, which would be marginally above the MUNI standard of 1.25 passengers per seat.

The project would contribute minimally to the cumulative increase in transit ridership. Cumulative increases would result in a decreased service level in the future, for several transit providers, as documented in the *Mission Bay EIR*. Project-generated MUNI trips would account for about 0.4 percent of the total MUNI trips in year 2000. Project-generated BART traffic would account for approximately 0.3 percent of the Transbay BART ridership, and 0.5 percent of the Westbay BART ridership.

Impact F.3: The proposed project would generate demand for long-term and short-term parking in the project area. (Not Significant)

The project would include up to 75 on-site parking spaces. The analysis for this EIR assumes that the proposed on-site parking would no less than replace the existing on-site parking, and therefore there would not be a net loss of on-site parking due to the project. As with the existing on-site parking, this parking would be reserved exclusively for judges and other state officials.

All project parking demand by other state employees and visitors would need to be accommodated off-site.

The parking study area is an area bounded by Eddy Street, Leavenworth Street, Market Street, Hayes Street, and Franklin Street, which defines a two-block radius around the project site. The parking supply in the study area includes both on-street and off-street parking facilities. For analysis purposes, the parking study area was divided into the area south of the project site from Golden Gate Avenue to Hayes Street (included in the *San Francisco Main Library EIR*) and the area north of the project site from Golden Gate Avenue to Eddy Street (added to the *Main Library EIR* study area for this project EIR).

Existing average parking demand was calculated for the study area using the total on-street and off-street parking supply and the average parking occupancy established by the *San Francisco Main Library EIR*, and augmented for the project analysis.

The number of on-street parking spaces within a two-block radius of the project site is about 1,410 spaces. The existing peak (mid-day) demand for on-street parking in the study area is approximately 1,200 spaces, and the resulting available on-street parking supply is about 210 spaces. The total number of striped off-street parking spaces in surface lots and garages to the south of the project site equals 2,310 spaces. To the north of the project, the off-street parking survey yielded 610 spaces. The total existing off-street parking supply is 2,920 spaces. Existing off-street parking demand is about 1,930 spaces, leaving about 950 spaces available.

Total on-street and off-street parking supply was determined to be about 4,330 spaces. Total peak (mid-day) parking demand is for about 3,130 spaces. The average occupancy for the study area was determined to be about 72 percent.

Parking demand was forecast for the project on the basis of the estimated project-generated vehicle traffic. The proposed project would create net new long-term parking demand for about 490 spaces and short-term parking demand for 125 spaces, for a total parking demand of about 615 spaces. When added to existing parking demand in the study area, the resulting occupancy rate would increase from about 72 percent to about 86 percent. Parking demand calculations are presented in Appendix C, Table C-4, p. A-56.

Cumulative parking conditions in the Year 2000 are based on a 5.7 percent growth factor for the period 1994 to 2000 (prorated from the City-assumed 15 percent growth in traffic between 1985 and 2000), plus estimated parking demand associated with the project (615 spaces) and with the New Main Library (468 spaces). Total parking demand is projected to increase to about 4,390 spaces, resulting in an unmet demand under cumulative conditions of about 60 spaces, assuming projects contained in the 5.7 percent background increase would not provide any on-site parking spaces. Peak-event cumulative parking conditions also were analyzed in the *Main Library EIR*. On peak weekdays with special events (such as the Harvest Festival at Brooks Hall) - about 45 weekdays per year - there would be a parking deficit of about 730 spaces, or about 775 spaces if the Fulton Street Mall were built. A parking shortfall would result in people parking farther from their destinations, or shifting to other modes of transportation.

The proposed project would not be formally subject to City of San Francisco plans and codes. The following discussion of San Francisco City Planning Code requirements is presented for informational purposes. It is state policy, however, for the proposed project to conform with local plans and codes, insofar as possible; the project's relationship to Code-required off-street parking is presented in that context.

The City Planning Code requires accessory parking for office space in the amount of one space per 500 sq. ft. of occupied floor area.[13] With existing space at the California State Building to be renovated, and existing space at the Annex to be demolished and replaced, the project would provide a total of 730,200 net square feet of general office space to support approximately 2,500 employees. Applying the City Planning Code ratio for off-street parking, a total of 1,460 spaces would be required to be provided. Code Section 155 requires one handicapped space for each 25 off-street parking spaces provided, and one bicycle space per 20 off-street space provided. Applying these rates to the calculated parking requirement, 58 of the 1,460 parking spaces would be required to be designated for handicapped parking, and 73 bicycle parking spaces would be required. The project proposes to provide up to 75 on-site parking spaces for the use of judges and state officials (no designation of handicapped spaces has been indicated), five motorcycle spaces and ten bicycle spaces.

Provision for the Code-required number of off-street parking spaces would result in a surplus of 845 spaces above the estimated parking demand. Such a surplus would serve as a disincentive to the use of carpools, vanpools and transit. Conversely, not providing the Code-required parking spaces, nor meeting estimated parking demand, would require project-generated traffic to

compete for a decreased supply of parking relative to demand in the area. The parking deficit would force some drivers to look for parking outside the immediate area. The long-term effect of the deficit would be to discourage auto use and encourage the use of local transit. The increased demand would not substantially alter the existing nature of the areawide parking condition. Therefore, unmet project parking demand would not be a significant environmental effect.

Impact F.4: The proposed project would increase pedestrian volumes on project area crosswalks. (Not Significant)

The project would generate approximately 360 person-trips as pedestrians during the midday peak 15-minute period and approximately 250 person-trips during the p.m. peak 15-minute period. Pedestrian trips would be distributed to and from transit bus stops and stations, vehicle parking spaces, and, for employee lunch trips during the midday period, to restaurants in the area. As described in the Setting, pedestrian levels of service are calculated using the methodology presented in Pushkarev and Zupan's *Urban Space for Pedestrians*.[9] For pedestrian crosswalks, pedestrian flow rates, or the number of pedestrians passing a point per unit of time, are the basis for the flow regimen designation. The flow rate is calculated using the width of the crosswalk and the number of pedestrians using the crosswalk per peak 15-minute period. (See Appendix C for an explanation of pedestrian flow rates and levels of service, and for photographs of sidewalk conditions for each flow regimen.)

The main pedestrian entrances to the proposed project would be on Golden Gate Avenue and McAllister Street, with secondary access on Larkin Street and Polk Street.

Table 8 summarizes pedestrian flow conditions in crosswalks near the site. The study crosswalks currently operate in open or unimpeded condition during both the midday peak 15-minute period and the 15-minute p.m. peak period. Conditions on these crosswalks following addition of the project pedestrian travel to existing volumes would be the same as at present except for the south crosswalk at McAllister/Van Ness (midday period), the north and east crosswalks at McAllister/Polk (midday and p.m. periods), and the west crosswalk at McAllister/Larkin (p.m. period). Conditions in each of those cases would worsen from open to unimpeded. In the year 2000, flow regimens on study crosswalks would not change from the existing plus project conditions, remaining in no less than unimpeded flow.

TABLE 8: PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN

	Total Width (feet)	Effective Width (feet) /a/	Existing (1994)		Existing Plus Project		Cumulative (2000)	
			Flow p/f/m /b/	Regimen /c/	Flow p/f/m	Regimen	Flow p/f/m	Regimen
NOON PEAK /d/								
McAllister Street / Van Ness Avenue								
North Crosswalk	8.0	8.0	0.6	Unimpeded	0.9	Unimpeded	0.9	Unimpeded
South Crosswalk	19.5	19.5	0.4	Open	0.5	Unimpeded	0.6	Unimpeded
East Crosswalk	13.8	13.8	0.7	Unimpeded	0.9	Unimpeded	1.0	Unimpeded
West Crosswalk	12.8	12.8	0.8	Unimpeded	0.9	Unimpeded	1.0	Unimpeded
McAllister Street / Polk Street								
North Crosswalk	12.2	12.2	0.4	Open	1.1	Unimpeded	1.1	Unimpeded
East Crosswalk	10.2	10.2	0.4	Open	0.7	Unimpeded	0.8	Unimpeded
West Crosswalk	12.0	12.0	0.6	Unimpeded	0.8	Unimpeded	0.8	Unimpeded
McAllister Street / Larkin Street								
East Crosswalk	12.0	12.0	0.9	Unimpeded	1.0	Unimpeded	1.2	Unimpeded
West Crosswalk	12.8	12.8	0.5	Unimpeded	0.7	Unimpeded	0.7	Unimpeded

/a/ The effective width of crosswalks is sometimes less than the total width, if vehicles are observed to regularly encroach into the crosswalk; this pattern of encroachment was not observed for this analysis.

/b/ Pedestrians per foot of effective crosswalk width per minute.

/c/ See Table C-3, Appendix C, pp. A-51, for descriptions of pedestrian flow regimen.

/d/ Peak 15-minute period.

(continued)

TABLE 8: PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN (Continued)

	Total Width (feet)	Effective Width (feet) /a/	Existing (1994)		Existing Plus Project		Cumulative (2000)	
			Flow p/f/m /b/	Regimen /c/	Flow p/f/m	Regimen	Flow p/f/m	Regimen
P.M. PEAK /d/								
McAllister Street / Van Ness Avenue								
North Crosswalk	8.0	8.0	0.6	Unimpeded	0.9	Unimpeded	1.0	Unimpeded
South Crosswalk	19.5	19.5	0.4	Open	0.4	Open	0.4	Open
East Crosswalk	13.8	13.8	0.7	Unimpeded	0.8	Unimpeded	0.8	Unimpeded
West Crosswalk	12.8	12.8	0.7	Unimpeded	0.7	Unimpeded	0.8	Unimpeded
McAllister Street / Polk Street								
North Crosswalk	12.2	12.2	0.3	Open	0.8	Unimpeded	0.8	Unimpeded
East Crosswalk	10.2	10.2	0.3	Open	0.5	Unimpeded	0.5	Unimpeded
West Crosswalk	12.0	12.0	0.3	Open	0.4	Open	0.4	Open
McAllister Street / Larkin Street								
East Crosswalk	12.0	12.0	0.7	Unimpeded	0.9	Unimpeded	1.0	Unimpeded
West Crosswalk	12.8	12.8	0.4	Open	0.7	Unimpeded	0.7	Unimpeded

/a/ The effective width of crosswalks is sometimes less than the total width, if vehicles are observed to regularly encroach into the crosswalk; this pattern of encroachment was not observed for this analysis.
/b/ Pedestrians per foot of effective crosswalk width per minute.
/c/ See Table C-3, Appendix C, pp. A-51, for descriptions of pedestrian flow regimen.
/d/ Peak 15-minute period.

SOURCE: Dowling Associates, and Pushkarev and Zupan, *Urban Space for Pedestrians*.

Impact F.5: The proposed project would generate demand for freight and service vehicle loading at the project site. (Not Significant)

Freight and service vehicle loading activity at the Annex currently generates a maximum of about 20 service vehicle stops per day. Prior to the closure of the California State Building, there were a maximum of about 25 daily service vehicle stops associated with activities at the project site.[14] The level of loading activity is lower than what theoretically would be expected to be generated by square footage of office space at the project site. That is due to the different characteristics of government office and courts uses versus commercial offices. Assuming a similar relationship between service vehicle stops and gross square footage for current and proposed uses at the project site, the project would generate a maximum total of about 42 service vehicle stops per day. If service deliveries would occur between 8:00 a.m. and 5:00 p.m., and were to average about 25 minutes in duration, average hourly loading space needs would be about two spaces per hour, with peak demand of two to three spaces per hour.[15]

As noted above, the proposed project would not be formally subject to City of San Francisco plans and codes. The following discussion of San Francisco City Planning Code requirements is presented for informational purposes. It is state policy, however, for the proposed project to conform with local plans and codes, insofar as possible; the project's consistency with Code-required off-street loading spaces is presented in that context.

Under the San Francisco City Planning Code, the project, outside the C-3 or South of Market areas, would be required to provide four loading docks to serve the 1,052,000 gross sq. ft. of office space (three spaces for 500,000 sq. ft. of gross floor area, plus one more for each additional 400,000 sq. ft., equals four spaces).[13] An off-street loading area capable of accommodating one 18-wheel truck, one 38-foot-long truck, and a 29-foot-long truck would be provided as part of the project. The project would not satisfy the City Planning Code requirement for provision of loading docks, but would meet the average demand for two loading spaces per hour and peak hourly demand of two to three loading spaces per hour. Therefore, project loading would not generate a demand in excess of space provided.

Impact F.6: Construction of the proposed project would generate short-term traffic increases and parking demand, and would add to the cumulative effect of overlapping activity associated with construction of other buildings in the Civic Center area. (Not Significant)

Temporary construction-related transportation impacts would result from construction employees and truck movements to and from the site during site clearance, excavation, and building activity. Construction activities generated at both the renovation of the California State Building and construction of the New State Office Building would take place simultaneously, beginning in February 1995 and ending in January 1998 (i.e., a three-year project). Project construction would also take place at the same time that construction activities related to several other buildings in the Civic Center vicinity would occur, including construction at City Hall, Civic Auditorium, Brooks Hall, Opera House, New Main Library, and the Federal Building.

During the project construction period, temporary and intermittent transportation impacts would result from truck movements to and from the project site. The demolition phase would occur first for the New State Office Building between September and December 1995. The excavation phase for the New State Office Building would occur between November 1995 and February 1996. The structural phase would begin at the California State Building in September 1995, and at the New State Office Building in December 1995; the structural phase would be completed by November 1997 for both buildings. The finishing phase for both buildings would occur between August 1996 and February 1998. Renovation of the California State Building would occur between September 1995 and November 1998.

During project construction, pedestrian travel would be accommodated on all streets adjacent to the project site. Construction fencing would be installed around the perimeter of the project site, and a chain link fence would extend along the outside of sidewalks adjacent to the site. The chain link fence would displace existing parking spaces on Larkin and Polk Streets adjacent to the project site to allow pedestrian travel on these streets. The sidewalks on Golden Gate Avenue and McAllister Street adjacent to the project site would be expected to remain open to pedestrians throughout the construction duration. The walkways adjacent to the New State Office Building would be covered.

Trucks would mainly travel up Ninth Street from I-80 and reach the site via Larkin Street. Throughout the three-year construction project, there would be an average of about 30 daily truck movements, and about 90 daily construction-worker trips. The project's construction

activities would reach their peak during the second-half of 1996 (during overlapping of the project's structural and finishing phases); during this period, a maximum of up to about 40 daily truck movements, and about 125 daily construction worker trips would be expected to occur.

Materials storage is proposed to be on-site, and would therefore not require construction vehicle trips to and from the project site on a frequent basis to deliver materials. The construction staging area has not been identified. Temporary parking demand from construction workers' vehicles, and impacts on local intersections from construction worker traffic, would occur in proportion to the number of construction workers who would use automobiles.

Impacts of construction-related traffic would include short-term and intermittent lessening of capacities of access streets and haul routes because of slower movements and larger turning radii of construction trucks compared to passenger vehicles. Potential lane blockage on Larkin Street, McAllister Street, Polk Street and Golden Gate Avenue, due to queued trucks, would reduce the capacity of these streets. The 5-Fulton, 16AX/BX-Noriega Express, 19-Polk MUNI routes, and SamTrans and Golden Gate Transit lines could be affected by truck movements. MUNI and/or Golden Gate Transit bus stops are located adjacent to the project site on Golden Gate Avenue at Polk and Larkin Streets, and on McAllister Street at Larkin Street.

Any truck traffic occurring during 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. would coincide with peak-hour traffic and impede traffic flow. Blockage during times of peak traffic flow would have greater potential to create conflicts that during non-peak hours because of the greater numbers of vehicles on the streets during the peak hour that would have to maneuver around the queued trucks. Limiting truck movements to the hours before 7:00 a.m., between 9:00 a.m. and 3:30 p.m., and after 6:00 p.m., would minimize disruption of the general traffic flow on Larkin Street, McAllister Street, Polk Street and Golden Gate Avenue during the a.m. and p.m. peak hours.

The project's peak construction period would occur during the overall peak construction period for other proposed development projects in the Civic Center area. During this period, project construction-generated traffic would account for nearly half of the construction truck traffic, and nearly one-third of the construction worker vehicle trips. Hence, construction traffic related to total construction activity in the Civic Center area would be about twice as high (for construction trucks) and three times as high (for construction workers) as for the project itself, and traffic congestion and transit delays could be more extensive than described above. These construction

traffic effects would not be significant, because they would be temporary, and because they would occur with the expected decreased background traffic resulting from the vacated state site, and other temporarily vacated Civic Center sites, such as City Hall.[16]

Impact F.7: The proposed project would contribute to cumulative transportation effects on regional freeways, local roadways serving as access for freeways and transit. (Significant)

Cumulative Context

The transportation sections of the *Mission Bay* and *South of Market Area Plan EIRs* address various regional transportation impacts in 2000 (the *Mission Bay EIR* also analyzes transportation impacts in 2020). The Mission Bay transportation impact analyses evaluate travel generated by Mission Bay in the context of growth in travel projected for the rest of the City and Bay Area. The South of Market analyses do the same for that area. It is growth in the City and region that would result in the greatest impact on most of the transportation systems studied.

Using slightly different analysis methodologies, the two EIRs employ the same basic screenline approach to study regional transportation impacts of San Francisco employment growth. Results differ somewhat, based on the differences in forecasting techniques, but generally by less than five to ten percent; this difference is well within the range of accuracy of ten year forecasts. Therefore, the two sets of results are compatible. This summary of cumulative transportation effects will report largely from the *Mission Bay EIR*, with *South of Market EIR* results included where there is notable relevant information.

In summary, both EIRs show that by 2000, congested highway conditions would result in a shift from autos to higher use of transit and ridesharing by travelers from the Downtown & Vicinity, which includes the project site. The East Bay would be the most congested corridor, the Peninsula would be the least. By 2020, travel demand would exceed the capacity of regional transportation systems. To serve regional growth, expanded transit and freeway systems would be required.

The proposed project is expected to be completed and occupied by the year 1998. Therefore, the impacts of the project and its contribution to cumulative transportation impacts would occur primarily in the 1985-2000 context. The information from the *Mission Bay EIR* for 2020 was prepared for the purposes of analyzing full buildout impacts of Mission Bay in a proper

cumulative context, and is more speculative and subject to change. It is presented for the reader's information.

The Analysis Years

The *Mission Bay EIR* analysis includes studies of transportation conditions in the year 2000, and, in order to account for buildout of the Mission Bay planning area, in the year 2020. Analyses for the 1985-2000 timeframe can rely on reasonably confident estimates of regional transportation capacity improvements as defined by the regional agencies' highway and transit planners. There are no regional transportation plans or policies for 2020. Therefore, the *Mission Bay EIR* uses a different approach for this longer-term analysis. For the 2020 analysis, rather than reporting the impacts of future travel on transportation systems as is the analytical approach for 2000, the estimates of 2020 travel conditions use the transportation system capacities developed for 2000 as a base and identify the types of transportation improvements likely to be necessary to serve growth in travel between 2000 and 2020.

Regional Travel

Regional travel was analyzed for each of the three major approaches to San Francisco: the North Bay via the Golden Gate Bridge; the East Bay via the San Francisco-Oakland Bay Bridge; and the Peninsula via the U.S. 101 and I-280 freeways.

The regional travel forecasts assume that where severe congestion is projected for the highway system and where parallel transit and ridesharing systems are available, travelers would choose to shift from their autos to fill the capacity available in transit and ridesharing systems. Those shifts are assumed to be made by travelers from the Downtown & Vicinity only, because they would have more transit and ridesharing options than travelers from other parts of the City or region. The shift to transit and ridesharing would be greatest for travel to the East Bay, somewhat less to the North Bay, and none would be expected for travelers to the Peninsula by 2000. (*Mission Bay EIR*, Vol. II, pp. VI.E.76-79; *South of Market Plan EIR*, pp. 109 - 112, C-38-40).

Growth in the entire Downtown & Vicinity, including the South of Market and Mission Bay, and the rest of the region would be the primary source of travelers trying to cross the Golden Gate and Bay Bridges, and to use the U.S. 101 and I-280 freeways at peak hours. (*Mission Bay EIR*, Vol. II, pp. VI.E.71-83; *South of Market EIR*, pp. C-46-47.)

North Bay Corridor. The *Mission Bay* and *South of Market EIRs* found that the Golden Gate Bridge and its approaches operated with moderate congestion (driving speeds of about 35 to 45 mph) in peak hours in 1985. By 2000, heavy congestion on the bridge (a driving speed of about 30 mph) would last about two hours during the p.m. commute period if additional transit capacity between downtown and the North Bay were provided, and a substantial shift from autos to transit and ridesharing were made by travelers from the Downtown & Vicinity. If no shift from 1985 transit use levels were to occur, the period of heavy congestion on the Bridge would last for about four hours in 2000.

Golden Gate Transit indicates that it would be able to increase its bus and ferry capacity between Downtown and the North Bay by 2000 in response to the demand generated. Golden Gate Bus ridership would almost double, with projected Levels of Service (LOS) of D during the p.m. peak hour and LOS C during the p.m. peak period. Golden Gate ferry ridership would grow by about 60 percent from 1985 to 2000 and operate at LOS B during the p.m. peak hour and period. Ridesharing is projected to increase by 7 percent to 15 percent between 1985 and 2000 in the North Bay.

By the year 2020, heavy congestion on the Golden Gate Bridge could last about four hours, assuming the levels of transit and ridesharing used in 2000, if there were no additional transportation improvements between 2000 and 2020. The *Mission Bay EIR* indicates that, by that time, the need to consider major new transportation infrastructure and transit systems will have become apparent. The *Mission Bay EIR* provides examples to illustrate the magnitude of improvements that could be necessary; those mitigation measures therefore are not prescriptive, but indicative of the level of investment required to respond to future travel demand, which would require in-depth review and analysis in the next phase of regional transportation planning. Those mitigation measures include adding a second deck to the Golden Gate Bridge to provide Transbay capacity for new bus and carpool lanes, or a light-rail line, either of which would extend between downtown San Francisco and Sonoma County. (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 39, 41, 71-92, 94-125, 129-134, 214-215, and 225-226; *South of Market Plan EIR*, pp. 98-105, and 111-124.)

East Bay Corridor. There currently is virtually no room for additional vehicle traffic on the eastbound Bay Bridge approaches between 4:00 p.m. and 6:00 p.m. While the growth in travel demand on the Bay Bridge from the Downtown & Vicinity could be served by shifting those commuters from autos to transit and increased ridesharing, trips to or from other areas of the

region generally are not well served by transit and would continue to be made primarily in private vehicles.

Even with the substantial shift to transit and ridesharing assumed in the analysis for travelers from the Downtown & Vicinity, the Bay Bridge would operate at capacity for about 4.5 hours in 2000, resulting in severe congestion on the San Francisco approaches to the bridge, travel speeds of less than 30 miles per hour, and heavy congestion on the bridge itself every weekday afternoon. Were the shift to transit and ridesharing from 1985 levels not to occur, the period of severe congestion in 2000 would extend for more than 5.5 hours.

By 2000, the numbers and proportion of commuters from the Downtown & Vicinity on BART during the p.m. peak period would be substantially higher. The number of trips on AC Transit would increase by about 65 percent based on the service available and the need to accommodate some riders that would otherwise use BART if ridership conditions were less crowded by 2000.

The ratio of passengers to seats on BART would increase from 1.30 in 1985 to 1.63 in 2000 (LOS F). AC Transit ridership would increase from 0.85 passengers per seat in 1985 to 1.30 in 2000 (LOS E). The capacity of BART is based on the maximum capacity of BART's computer system to track trains. The crowding projected for BART could not be fully mitigated during the peak period because of the system's technical operating limits.

An increase of seven percent in ridesharing from the Downtown & Vicinity across the Bay Bridge is projected for 2000. Even with substantial shifts to transit and ridesharing by commuters from the Downtown & Vicinity, by 2020 severe congestion on the Bay Bridge and its approaches would last for more than five hours. The number of regional vehicle trips which could not be served by the Bay Bridge during the p.m. peak period (4:00 p.m. - 6:00 p.m.) would grow from about 3,100 vehicles in 2000 to about 5,800 vehicles in 2020.

Mitigating those levels of congestion would require consideration of major changes to the regional transbay transportation system connecting the West Bay and East Bay. Virtually all of the concepts would require the City to work with MTC, Caltrans, and local government agencies to undertake the regional planning needed to expand transbay transportation capacity. (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 37-41, 71-92, 94-124, 126-127, 129-133, 215-216, and 226-230; *South of Market EIR*, pp. 98-105, and 111-124.)

Peninsula Corridor. Between 1985 and 2000, traffic would increase on U.S. 101 and Interstate 280, the freeways serving the Peninsula. However, there would be less congestion on those routes at the San Mateo County Line than on the Golden Gate and Bay Bridges. Both U.S. 101 and I-280 were only moderately congested at the San Mateo County line in 1985. In or near San Francisco, the capacity of local streets, U.S. 101, and I-280 would be sufficient to handle future travel demand; the switch from highway to transit modes by Downtown & Vicinity commuters assumed for the Golden Gate and Bay Bridges would not be required for the routes serving the Peninsula. The transit analysis for 2000 and 2020 in this regional corridor therefore uses the same amount of transit capacity as in 1985.

U.S. 101 at the San Mateo County line would operate at capacity for about three hours in 2000, with heavy congestion and speeds of 30 miles per hour occurring during that afternoon peak period. By 2020, heavy congestion on U.S. 101 would last for over three afternoon hours. I-280 would operate with only moderate congestion at the county line in 2000 and 2020 with speeds averaging 35 to 45 miles per hour throughout the peak period. The congestion projected in 2020 would be reduced if commuters from the Downtown & Vicinity chose to increase their use of transit or ridesharing above the 1985 levels.

Transit ridership to the Peninsula would grow, although not to the extent that transit capacity would have to be increased above the 1985 levels. In 2000, the level of service on transit would remain high during the p.m. peak period (LOS B or C for all carriers), as there would be no system where ridership would be greater than available seats. Use of BART and SamTrans would grow by about 40 percent while CalTrain ridership would grow by just 5 percent (assuming the CalTrain station remains at Fourth and Townsend Streets). In 2020, CalTrain, BART and SamTrans would carry even larger loads, but would continue to operate below capacity (LOS B or C). (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 37-38, 42-43, 61-62, 71-92, 94-124, 127-133, 216-217, and 230-231; *South of Market EIR*, pp. 98-105, and 111-124.)

Regional Highway Constraint Points

As a result of growth in regional travel demand, the following freeway segments lying beyond the screenlines in the transportation analysis could constrain San Francisco travel: the I-80/I-580/I-880 interchange in Oakland; the Caldecott Tunnel on State Route 24; I-80 in Alameda and Contra Costa Counties; U.S. 101 in Marin County; and U.S. 101 south of I-380 in San Mateo. (*Mission Bay EIR*, Vol. II, pp. VI.E.133-140.)

Local Transit and Streets

MUNI. To analyze cumulative impacts on MUNI, individual MUNI routes were grouped on the basis of the location of their alignments and stops into the "Northeast," "Northwest," "Southwest," and "Southeast" areas of San Francisco, referred to as "screenlines." By 2000, ridership would generally be accommodated on the MUNI screenlines. Slight overcrowding (LOS E) would occur on the Northwest screenline during the p.m. peak hour, and on the Northeast screenline during the p.m. peak period. However, by 2020, all but the Southwest screenline would be operating beyond MUNI's load standard (an overall average of 1.25 passengers per seat). Additional service required could include new light rail service to the Geary Boulevard corridor to the northwest, and to the Bayshore corridor in the southeast area of the City. (*Mission Bay EIR*, Vol. II, pp. VI.E.34-35, 93-99, 103-104, 114-124, 129-133, 217, and 231; *South of Market Plan EIR*, pp. 98-102, 112-117, C-19-21, and C-37.)

Local Streets. The *Mission Bay* and *South of Market EIRs* assumed the transportation network that existed before the Loma Prieta earthquake to be in place in the future. The following discussion is based on that assumption, modified to account for the fact that the Embarcadero Freeway has been demolished.

Severe congestion would continue to occur in both 2000 and 2020 on several of the James Lick (I-80) freeway approaches in the South of Market Area. Those streets and freeway ramps serve traffic destined for the Bay Bridge and Peninsula. Several of those streets are heavily congested now. The number of severely congested I-80 approach intersections would increase by 2000 and increase again by 2020, and this congestion would be worse than was projected by the *Mission Bay* and *South of Market EIRs* because the roadway that eventually replaces the Embarcadero Freeway would have less travel capacity than did the elevated freeway.

The First / Harrison Street, Fifth / Bryant Street, and Sixth / Brannan Street intersections presently operate at LOS F and would continue to do so in the future. Other intersections at or near freeway ramps, such as Fourth and Harrison Street would deteriorate to LOS E or F in the future. Intersections near freeway ramps are often affected by freeway access queues, as cars waiting to enter the freeway back up to or through these intersections. This affects local traffic attempting to use streets in these areas. Some traffic will shift and use less congested routes in the future as this problem increases. Continued enforcement of the ordinance passed in 1987 prohibiting blocking an intersection should help to limit this problem. By 2000, certain

improvements to the local street network are planned to be in place, which would facilitate traffic circulation and access to I-280 by travelers from the Downtown & Vicinity. As a result of the I-280 Transfer Concept Program and Mission Bay Plan, King Street would be improved to function as a major roadway, with new on- and off-ramps to I-280. With cumulative development, the new major intersections at Third / King Streets, and Fourth / King Streets are projected to operate at LOS D in year 2000, and LOS E and F in 2020, respectively. Mitigation measures to provide for more left-turn lanes and towaway lanes during commute periods would reduce congestion. (*Mission Bay EIR*, Vol. II, pp. VI.E., 140-148, 166-175, 200-201, and 218-219; *South of Market EIR*, pp. 105-106, and 124-126.) It is expected that operating conditions on other local South of Market streets and intersections not serving freeway ramps (or near freeway-serving intersections) would continue to operate in a generally free flowing manner in the future, at least to 2000.

For the local street system to operate at the level described above, there would have to be a high level of public transit use in the Downtown & Vicinity. In 1985, about 55 percent of all afternoon peak-hour outbound trips from the Downtown & Vicinity were on public transit. That level of transit could grow to about 70 percent of all trips, based on the increased capacity of transit systems expected to be available by 2000, and the congestion levels estimated to occur in the future.

As described on p. 122, the Embarcadero Freeway has been demolished. Given this fact, the local street system serving The Embarcadero roadway will operate differently than the manner in which it served the Embarcadero Freeway, and operating conditions will vary from that projected in the *Mission Bay* and *South of Market Plan EIRs*. Generally, queues and delays at intersections will be lengthened along the street corridors leading to remaining Bay Bridge ramps during the afternoon commute, and an increase in average delays on the Bay Bridge would be expected during the morning commute period.

Future development in the project vicinity includes the Superior and Municipal Courts at McAllister and Polk Streets, approved by the San Francisco City Planning Commission in July 1994. The U.S. General Services Administration is proposing a new federal office building at 10th and Market Streets, about three blocks south of the site. That project would be about 673,000 gross square feet. Other potential development in the area includes an approved mixed-use development at 630, 636-646 Van Ness Avenue and 661 Turk Street. This site is in interim use as a parking lot; the property is currently for sale. At 600 Van Ness Avenue, a mixed-use

development to include elderly housing, a McDonald's restaurant, and associated retail/clinic space is currently undergoing review by the City of San Francisco.

The EIR for the project considers localized cumulative impacts, including, but not limited to, the project plus the proposed New Main Library at Larkin and Fulton Streets; those impacts are not considered significant. The *Mission Bay* and *South of Market Plan EIRs* include forecasts of space by use for the greater downtown area in San Francisco (the Downtown & Vicinity) for the Year 2000. These forecasts account for a decline rather than anticipated growth in employment in the C-3 District and elsewhere in the Downtown & Vicinity during the early 1980's, provide forecasts of space associated with employment growth in the future, and take into account specific buildings approved or under construction that would accommodate a portion of the employment increase forecast. The forecasts go beyond the timeframe during which the known and proposed space would be built and absorbed. The project, as part of the Downtown & Vicinity, is accounted for in this cumulative land use analysis.[17] As overall cumulative effects could not be mitigated by measures incorporated as part of the project itself, cumulative effects, to which the project would contribute, would be significant.

Mitigation

Impacts F.1 to F.5, on roadway, freeway, transit, parking, transit and freight loading would not be significant. To further reduce less-than-significant impacts, however, the State would establish a standard transportation coordination program, as called for in the *Department of General Services Operations Manual,* Sections 1000 et seq. The DGS Office of Buildings and Grounds initiates transportation coordination with tenant agencies to reduce single-occupant vehicles. Once the building is fully occupied, Buildings and Grounds maintains a central bulletin board with transportation information, and coordinates the annual transportation fair for tenant agencies. Day-to-day transportation management, however, then becomes the responsibility of tenant agencies, consistent with Executive Order D-73-88. That directive requires agencies to develop and maintain transportation plans that achieve a minimum ten percent annual reduction in commute trips toward the goal of an average of two employees per vehicle during commute periods in congested areas. Transit pass subsidies and incentives for vanpool drivers are also provided by the tenant agencies.

Mitigation F.6: The project would adhere to the recommended actions and practices established by the Civic Center Coordinating Committee, as part of the *Construction Staging Areas, Street and Sidewalk Use Plan* currently being prepared.

A mitigation measure standard for projects in San Francisco modified for the project (as indicated by italicized text), which could also be adopted by the State, is as follows:

> During the construction period, construction truck movement would be permitted only *before 7:00 a.m.,* between 9:00 a.m. and 3:30 p.m., *and after 6:00 p.m.,* to minimize peak-hour traffic (including transit) conflicts. The project sponsors and construction contractor(s) would meet with representatives of the City of San Francisco Department of Parking and Traffic (Traffic Engineering Division), Fire Department, MUNI and Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion and pedestrian circulation impacts during construction of this project and other nearby projects that are planned for construction or which later become known. To minimize cumulative traffic impacts due to lane closures during construction, the project sponsors could coordinate with construction contractors for any concurrent nearby projects that are planned for construction or become known.

Mitigation F.7: As discussed above, tenant agencies would implement transportation management to encourage state employees to use alternative ("non-drive alone") modes of transportation to and from work. This would reduce the project's contribution to cumulative effects. Cumulative effects would remain significant.

Measures For Cumulative Effects That Could Be Implemented By Other Agencies

The City of San Francisco could act upon or endorse the implementation of transportation mitigations described in the *Mission Bay EIR* Vol. II, Section VI.E, Mitigation, pp. VI.E.214-VI.E.217 for the year 2000 and VI.E.224-VI.E.231 for 2020, and in the *South of Market EIR*, pp. 189-194. The measures for the year 2000 include: construction and maintaining rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; increased funding for Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; providing exclusive transit lanes on City streets and on freeways; reducing incentives to drive by discouraging long-term parking; encouraging carpools, vanpools, and bicycle use; improving pedestrian circulation within downtown San Francisco; and providing transportation brokerage services. The *Mission Bay EIR* describes various types of measures to illustrate the magnitude of improvements needed to mitigate the impacts of regional growth in 2020. Implementation of these measures could mitigate significant cumulative effects.

Significant After (Project) Mitigation: **Significant.**

NOTES - Transportation

1 Jeffery Weiss, Public Information Officer, Caltrans, telephone conversation, April 13, 1994.

2 City and County of San Francisco Department of City Planning, *Terminal Separator Structure / Transbay Terminal*, Report to the Mayor, July 26, 1993.

3 Jerry Robbins, Traffic Engineer, San Francisco Department of Parking and Traffic; telephone conversation, April 13, 1994.

4 City and County of San Francisco, *San Francisco Master Plan*, Transportation Element, amended November 1984, p. I.4.16.

5 Traffic counts were conducted by Traffic Research Associates on Tuesday to Thursday, June 28-30, 1994, and by Wilbur Smith Associates in January, March and April 1994 for the Central Freeway Study and the EIR/EIS for the proposed Federal Office Building at Market Street and Tenth Street.

6 Transportation Research Board, *Transportation Research Circular Number 212*, 1980.

7 Walking distance is considered one-fourth of a mile.

8 Weekday on-street parking counts were conducted by Wilbur Smith Associates on Wednesday, October 10, 1990, and augmented by Dowling Associates in June 1994.

9 Pushkarev and Zupan, *Urban Space for Pedestrians*, MIT Press, Cambridge, MA, 1975.

10 Deduction of existing travel demand is per San Francisco Department of City Planning's *Guidelines for Environmental Review: Transportation Impacts*.

11 *Transmittal of Requested 1993 State of California Annual Commute Survey: Commute Mode Splits for Selected Agency Worksites*, from Judith B. MacBrine, Chief, Office of Child Care and Travel Issues, Office of Traffic Improvement, State Department of Transportation (Caltrans), to Christal Waters, Senior Environmental Planner, Office of Project Development and Management, State Department of General Services, January 14, 1994.

12 City and County of San Francisco Department of City Planning, *Guidelines for Environmental Review: Transportation Impacts*, Appendix 3.7: Van Ness Avenue Commercial Non-Work Trips Based on P.M. Peak Period Trip Distribution and Mode Split.

[13] City and County of San Francisco, *Planning Code*, Section 151, Table 151: Off-Street Parking Spaces Required; and Section 152, Table 152: Off-Street Freight Loading Spaces required (Outside C-3 and South of Market Districts).

[14] Frank Arteaga, Building Manager, California State Building Annex, telephone conversation, August 29, 1994.

[15] Average hourly loading space need is equal to the daily loading demand divided by the number of hours of loading (i.e., 8:00 a.m. to 5:00 p.m., or nine hours), divided by the number of vehicles that could be accommodated per hour (i.e., 2.4 per hour on the basis of a 25-minute duration). A factor of 1.25 is applied to average conditions to reflect peak loading/unloading times.

[16] San Francisco Department of Public Works, Bureau of Architecture and Turner Construction Company, *San Francisco Civic Center Construction Staging Areas, Street and Sidewalk Use Plan*, May 1994.

[17] The forecasting method and background is described in the *Downtown Plan EIR* (pp. IV.B.1-8, IV.B.12-43, IV.B.54a-61, and Appendices G and H). In addition, the forecasts of future office space and employment, and an explanation of the methods used, can be found in the *South of Market Plan EIR*, pp. 66-85 and Appendix B, and in the *Mission Bay EIR* Vol. II. pp. VI.B.13-28, VI.B.38-79, VI.B.106-112, and VI.B.119-123, and Vol. III, Appendix B (see especially *Mission Bay EIR* Appendix B, pp. XIV.B.24-30 for a comparison to the *Downtown Plan EIR* forecasts). The method was not changed in forecasts prepared for the *South of Market* and *Mission Bay EIR* analyses, but several changes were made in the analysis and results.

G. NOISE

SETTING

Existing Noise Conditions

The existing ambient noise environment in the vicinity of the project site is typical of downtown San Francisco, dominated by vehicular traffic including cars, trucks, buses and emergency vehicles. The Environmental Protection Element of the San Francisco *Master Plan* indicated that the Civic Center area was subject to background noise levels of 65 dBA (Ldn)[1,2] in 1974. In addition, the Environmental Protection Element indicated the following 1974 noise levels in the site vicinity:

Street	Noise Level (Ldn)
Larkin Street	65 dBA
Hyde Street	65 dBA
Polk Street	70 dBA
McAllister Street	70 dBA
Golden Gate Avenue	70 dBA
Van Ness Avenue	80 dBA

The Downtown Plan EIR indicated a day-night average noise level (Ldn) of 73 to 75 dBA in 1984 on Tenth Street and Van Ness Avenue, respectively, which are the closest identified major streets to the project site.[3] A 24-hour noise measurement taken in 1991 on Larkin Street at Civic Center Plaza (between Fulton and Grove Streets) measured 71 dBA (Ldn).[4] During the night (10:00 p.m. to 7:00 a.m.), the hourly noise level ranged from about 57 dBA to about 68 dBA. During the day (7:00 a.m. to 10:00 p.m.), the hourly noise level ranged from about 58 dBA to 69 dBA.

Existing Land Uses and Sensitive Receptors

Existing surrounding land uses are primarily office, commercial, performing arts and residential uses. Other than the office buildings, most buildings have retail commercial uses (including restaurants, personal services) on the ground floor with residential or office uses above (see Figure 16).

South of the project site, across McAllister Street, is Civic Center Plaza, which is occupied by park and playground uses. West, across Polk Street, are office and ground-floor retail uses with

residential or office uses above. The area includes the vacant state offices at 525 Golden Gate Avenue, and the site of the approved San Francisco Courts Building. For purposes of this EIR, those buildings are not assumed to be occupied during project construction. Across Larkin Street to the east, there are public, residential, and off-street parking uses on the western portion (facing the site), while the remaining portions of the block have institutional and ground-floor retail uses with residential uses above. To the north across Golden Gate Avenue is the Phillip Burton Federal Building.

On the block to the northeast, the western and southern frontages facing the site are occupied by ground-floor retail uses with residential uses above. To the northwest facing the site are ground-floor retail uses with offices above. The block to the southwest is occupied by the San Francisco City Hall, while the block to the southeast is occupied by the old Main Library.

Sensitive noise receptors are generally considered to be uses such as hospitals, nursing homes, senior citizen centers, schools, churches, libraries, and residences. Sensitive receptors in the project vicinity include residential uses located to the east at 324 Larkin Street and northeast at 378 Golden Gate Avenue. About one block west of the site are residential uses at 512 Van Ness Avenue. The old Main Library at Larkin and McAllister Street, about 200 ft. southeast of the site, will be in use until late 1995. The New Main Library is under construction on the Larkin-Fulton-Grove block, about 500 ft. south of the site. Although not typically considered sensitive receptors, activities associated with adjacent office, library and open space uses could be disrupted during project-related demolition and construction. Therefore, these are considered temporary sensitive receptors (during construction only). (See Figure 16, p. 30, for Existing Land Uses in the Project Area.)

<u>Noise Regulations</u>

San Francisco noise regulations are stipulated in Article 29 of the Police Code, which states the City's policy is "to prohibit unnecessary, excessive and offensive noises from all sources subject to police power." Sections 2907 and 2908 of Article 29 regulate construction equipment and construction work at night.

Section 2907(b) states "it shall be unlawful for any person, including the City and County of San Francisco, to operate any powered construction equipment, regardless of age or date of acquisition, if the operation of such equipment emits noise at a level in excess of 80 dBA when

measured at a distance of 100 ft. from such equipment, or an equivalent sound level at some other convenient distance." Exemptions to this requirement include:

- impact tools and equipment with intake and exhaust mufflers recommended by the manufacturers and approved by the Director of Public Works as best accomplishing maximum noise attenuation; and

- pavement breakers and jackhammers equipped with acoustically attenuating shields or shrouds recommended by the manufacturers and approved by the Director of Public Works as best accomplishing maximum noise attenuation.

Section 2908 prohibits any person, between the hours of 8:00 p.m. of any day and 7:00 a.m. of the following day, to erect, construct, demolish, excavate for, alter, or repair any building or structure if the noise level created is in excess of the ambient noise level by 5 dBA at the nearest property line unless a special permit therefore has been applied for and granted by the Director of Public Works.

IMPACTS AND MITIGATION

Significance Criteria

The project would be considered to have a significant effect if it would exceed average noise levels of 80 dBA during project construction (excluding impact tool use), at a 100-ft. distance from the source; exceed ambient noise levels by 5 dBA during project construction at the project property line between the hours of 8:00 p.m. and 7:00 a.m.; or create vibration from construction that could substantially damage nearby buildings.

Impacts

Impact G.1: Demolition and construction activities would result in temporary noise increases in the site vicinity. (Potentially Significant)

During project construction, temporary noise increases would result from the operation of heavy equipment. The construction period, including demolition and grading, would last approximately 36 months. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and receptor, and presence or absence of barriers between noise source and receptor. To estimate probable noise impacts, typical equipment and construction techniques are assumed.

Construction noise sources range from about 76 to 85 dBA at 50 ft. for most types of construction equipment with slightly higher levels of about 88 to 91 dBA at 50 ft. for certain types of earthmoving and impact equipment. Noise levels from pile drivers can generate noise peaks of approximately 101 dBA at 50 ft. However, no foundation pile driving would be required, since the new building would have a concrete mat foundation. The rate of attenuation is about six decibels (dBA) for every doubling of distance from a point source. Average noise levels at 50 and 100 ft. from the noise source for several types of typical construction equipment and potential noise attenuation are shown in Table 9. Soldier-pile driving, proposed around the perimeter of the site, to shore the excavation walls would be less noisy than foundation pile-driving, due to less resistance.

Average noise levels by construction phase and potential duration of these levels are estimated for typical commercial building construction based on the proposed construction schedule and noise generation characteristics of specific construction equipment types (as listed in Table 9). Results are listed in Table 10.

Average noise levels generated by construction equipment could result in temporary disturbance (e.g., speech interference) to persons in adjacent buildings if the noise level in the interior of the building were to exceed 45-60 dBA.[5] A typical building can reduce noise levels by 25 dBA with the windows closed and about 10-15 dBA with windows open, although the actual noise attenuation may vary depending on building construction and design.[6] This noise reduction could be maintained only on a temporary basis in some cases, as it assumes windows would remain closed at all times. Assuming a 25-dBA reduction with the windows closed, an exterior noise level of 70-85 dBA at receptors would maintain an acceptable interior noise environment for normal conversation. Such exterior noise levels could be exceeded at uses within 100 ft. of the site without feasible noise controls, interfering with normal speech indoors with the windows closed. When individual types of construction equipment are considered (as listed in Table 9), average noise levels generated by the operation of certain types of construction equipment could exceed 80 dBA at 100 ft. without noise controls. This would be considered a significant impact.

Based on average noise levels shown in Table 10, average noise levels (without feasible noise controls) could be maintained below 80 dBA at 100 ft. throughout project construction, except during the demolition, clearing and construction phase when average levels would be 81 dBA at 100 ft. This would exceed the 80-dBA criterion at 100 ft. and would be considered a significant impact. Within this 100-ft. distance, a residential building is 80 ft. east of the site, at

TABLE 9: AVERAGE NOISE LEVELS AND ABATEMENT POTENTIAL OF CONSTRUCTION EQUIPMENT NOISE AT 50 AND 100 FT. (in dBA)

Equipment	Noise Level at 50 Ft. (Before Mitigation)	With Feasible Noise Control (After Mitigation)	Noise Level at 100 Ft. (Before Mitigation)	With Feasible Noise Control/a/ (After Mitigation)
Earthmoving				
Front Loaders	79	75	73	69
Backhoes	85	75	79	69
Dozers	80	75	74	69
Tractors	80	75	74	69
Scrapers	88	80	82	74
Graders	85	75	79	69
Trucks	91	75	85	69
Pavers	89	80	83	74
Materials Handling				
Concrete Mixer	85	75	79	69
Concrete Pump	82	75	76	69
Crane	83	75	77	69
Derrick	88	75	82	69
Stationary				
Pumps	76	75	70	69
Generator	78	75	72	69
Compressors	81	75	75	69
Impact/b/				
Pile Drivers	101	95	95	89
Rock Drills	98	80	92	74
Jack Hammers	88	75	82	69
Pneumatic Tools	86	80	80	74
Other				
Saws	78	75	72	69
Vibrators	76	75	70	69

/a/ Estimated levels obtainable by selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme cost.
/b/ Pile-driving and rock-drilling are not proposed as part of the project.

SOURCE: U.S. Environmental Protection Agency. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

TABLE 10: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS

Construction Phase	Estimated Duration of Phase (months)	Average Noise Levels (dBA) at 50 Ft.
Demolition, Ground Clearing and Excavation	4	87
Structural Steel and Concrete	26	85
Wall and Ceilings	10	85
Finishes /a/	7	n/a

/a/ This phase refers to finish carpentry, painting, carpets and other such interior work that could be completed only after construction of exterior walls. Most noise would be contained within the building shell. Noise audible on the outside would be largely intermittent and would be expected to be quieter than other phases of construction shown in this table.

SOURCE: Luster Construction Management, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, July 30 and August 30, 1993; adapted from U.S. Environmental Protection Agency, December 1971.

324 Larkin Street. Distances of approximately 200 ft. would be required to maintain average noise levels below 70 dBA. Residential uses are located 100-200 ft. to the northeast corner of Larkin Street and Golden Gate Avenue at 378 Golden Gate Avenue; ground-floor commercial with offices above about 100 ft. to the northwest; and the Federal Building directly north of the site, set back from Golden Gate Avenue. At those distances, the occupants of the residential building to the east could be subject to exterior noise levels of 81-83 dBA. Interior noise levels would be 10 to 25 dBA lower, depending upon open or closed windows during the first three phases of project construction (as outlined in Table 10), when construction occurs on site perimeters closest to these receptors. Other identified uses would be subject to average construction noise levels between 70 and 80 dBA throughout construction. Construction noise would not be expected to adversely affect occupants of the Federal Building on Hastings College of the Law buildings, due to distance from construction, and sealed-window conditions in those buildings.

During construction, noise levels at the old Main Library would be 70 to 80 dBA, with windows open, and 45 to 70 dBA or less with windows closed. These noise levels could make study difficult, and disrupt conversations between patrons and library staff. By early 1996, the New Main Library, further from the state site, would be in use, and staff and patrons would not be affected by on-going state project construction noise.

Civic Center Plaza would also be subject to project demolition and construction noise, but potential noise increases would be reduced by the existing California State Building. The State Building would serve as a noise barrier, blocking noise generated on the northern portion of the site from the Plaza. Renovation activities at the California State Building itself would not be expected to create noise levels above 80 dBA 100 ft. from the site, as they would be primarily interior construction activities.

Any nighttime construction activities (occurring between 8:00 p.m. and 7:00 a.m.) would have the potential to result in disturbance of adjacent residential uses due to people's greater sensitivity to nighttime noise. In addition, average noise levels generated by certain types of project construction activities (with or without feasible noise controls by equipment type, Table 9, or construction phase, Table 10) would have the potential to increase the nighttime ambient noise levels by more than 5 dBA, exceeding the 5-dBA significance criteria for nighttime noise. This would be considered a significant impact.

Impact G.2: Construction equipment vibration could damage nearby buildings. As pile-driving is not proposed with the project, levels of vibration from other activities would not be expected to cause damage. (Not Significant)

Vibration could be generated by operation of construction equipment. Vibration is typically a concern with use of impact tools (e.g. pile driving) and not with other construction activities. Since pile driving would not be required, use of other types of construction equipment would not be expected to generate levels of vibration that would cause damage to nearby buildings. Therefore, this would not be a significant effect.

Impact G.3: Project construction would result in a temporary increase in truck traffic. (Not Significant)

Residents located along haul routes would be subject to truck noise during the 36-month construction period, with most of the truck traffic occurring during the demolition and

excavation phases. After the demolition and excavation phases, truck traffic would be associated primarily with equipment and supply deliveries. Although the haul route ultimately used would depend on the disposal location, it is anticipated that trucks would travel either southeastward to I-80 or I-280 or westward to Van Ness Avenue or U.S. 101. Trucks leaving the site could travel east on Golden Gate and south on Hyde, because of one-way street patterns, and generate noise effects near residential uses on those streets. During demolition, about 26 trucks a day would leave the site, and during excavation, about 45 trucks per day. The noise from a single passing truck would average 85 dBA at 100 ft. (without feasible noise controls) depending on travel speed and truck size (see Table 9). Truck noise would have the potential to exceed the 80-dBA criterion at 100 ft. Mitigation measures identified for Impact G.1 would avoid a significant effect.

Impact G.4: Cumulative construction noise increases could occur in the project vicinity if construction of other planned/approved projects occurs simultaneously. Use of feasible controls (e.g. exhaust mufflers, intake silencers and engine enclosures) could reduce levels to less than 70 dBA at 100 ft. (Not Significant)

Other development in the Civic Center is in different stages of planning, environmental review, approval, or construction. Southeast of the site, the new Main Library is currently under construction, with completion by the end of 1995. Remodeling of the existing library building to house the Asian Art Museum is not yet funded. Construction of the new Courts Building began with demolition in August 1994 and completion is scheduled for the end of 1996. Seismic renovation of City Hall would commence in April 1995, with completion scheduled for December 1997. Other Civic Center projects include seismic upgrade and renovation of Bill Graham Civic Auditorium (1994-1995); San Francisco Department of Public Health (1995-1997); Opera House (1996-1997). These renovation projects would not be expected to generate construction noise effects above the 80-dBA criterion, in the vicinity of the state project site.

Phases of project construction would occur at the same time as construction of the Courts Building. Due to the proximity of these sites, construction of both projects could result in cumulative construction-related noise increases if some of the noisier phases of construction were to occur simultaneously. On the basis of current scheduling, it appears that the excavation phase to the Courts Building would not overlap with this phase of the proposed project. Construction-related noise would be generated on both sites during 1995. The only building located directly adjacent to both projects is the vacant 525 Golden Gate Avenue building. Although Civic Center Plaza would also be exposed to both sites, the California State Building

would partially block on-site construction noise from the Plaza. Other nearby buildings would be located adjacent to only one of the two sites and exposure to both sites would be limited by distance or intervening buildings. Simultaneous construction activities could increase overall, construction-related noise levels by a total of one to three dBA.

Mitigation

Mitigation G.1: The project would include construction measures for equipment noise, truck scheduling, and noise barriers to minimize potentially significant construction noise impacts:

G.1.a. The project would use equipment and trucks with noise control (e.g., improved exhaust mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts. Before project construction, all construction equipment (except for impact tools, pavement breakers and jackhammers) would be tested to ensure that equipment noise does not exceed an average level of 80 dBA at 100 ft.

G.1.b. The project would prohibit truck and heavy equipment operations during the nighttime hours (8:00 p.m. to 7:00 a.m.) to minimize potential disturbance of adjacent residents.

G.1.c. The project would locate stationary construction noise sources, such as compressors, as far from adjacent residences as possible. If it were necessary to locate equipment near existing residences, they would be enclosed within temporary sheds.

G.1.d. The project contractors would use hydraulically or electrically powered impact tools (e.g., jack hammers, pavement breakers, and rock drills) wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust would be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dBA.[7]

Significance After Mitigation G.1.a.-d: **Less-than-significant**

Mitigation G.3: Truck noise generation would be restricted under Mitigation G.1.a and G.1.b.

Significance After Mitigation: **Less-than-significant**

No significant effects from vibration or cumulative construction effects were identified. Therefore, no mitigation measures are proposed.

NOTES - Noise

1 City and County of San Francisco, Department of City Planning, *San Francisco Master Plan. Environmental Protection Element,* p. 1.6.13, 15.

2 dBA is a measure of sound in units of decibels (dB) on the A-weighted scale. The A-weighted decibel scale simulates the response of the human ear to various frequencies of sound.

Ldn, a day-night average noise level, represents a cumulative measure in decibels (dBA) of community noise during a 24-hour period. It applies weighting factors to account for people's lower tolerance to noise during the night (10 PM to 7 AM).

3 San Francisco Department of City Planning, *Downtown Plan EIR,* Case No. 81.3E, certified October 18, 1984, Volume 1, pp. IV.J.1-19, particularly Table IV.J.2, pp. IV.J.9-10.

4 San Francisco Department of City Planning, *San Francisco Main Library EIR,* 90.808E, Final EIR certified February 27, 1992; p. 165.

5 In indoor noise environments, the highest noise level that permits relaxed conversation with 100% intelligibility throughout the room is 45 dBA. Speech interference is considered to become intolerable when normal conversation is precluded at 3 ft., which occurs when background noise levels exceed 60 dBA. In outdoor environments, the highest noise level that permits normal conversation at 3 ft. with 95% sentence intelligibility is 66 dBA (U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety).*

6 U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety,* March 1974.

7 U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances,* December 1971.

H. AIR QUALITY

SETTING

The Bay Area Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O_3), carbon monoxide (CO), fine particulate matter (PM_{10}), lead (Pb), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). On the basis of the monitoring data, the Bay Area, including San Francisco, is designated a "non-attainment" area with respect to the Federal O_3 and CO standards. These standards are shown in Appendix D-1. San Francisco occasionally experiences violations of state eight-hour CO and PM_{10} standards, but has not recently violated the O_3 standard. A six-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about 1.4 miles south at 10 Arkansas Street) is shown in Appendix D-2, together with the most stringent corresponding state and/or Federal ambient air quality standards, From 1987 to 1992, there were no violations of the one-hour or eight-hour CO standards at the Arkansas Street monitoring station. The state PM_{10} standard was violated 9 days out of 61 measurement days in 1992; during 1991, the PM_{10} standard was violated 15 days out of 60 measurement days. At the Ellis Street Monitoring Station (about 1/4 mile north of the project site at 939 Ellis Street), the CO standard was violated once each in 1987 and 1988.[1]

CO concentrations are monitored both at the10 Arkansas Street areawide monitoring station and at 939 Ellis Street, which is located along Van Ness Avenue, a highly traveled corridor. Monitored levels are expected to be fairly representative of the project site.

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all developed portions of the Bay Area. Three of the four prevailing winds, west, northwest, and west-northwest, blowing off the Pacific Ocean, reduce the potential for San Francisco to receive air pollutants from elsewhere in the region.

Data from air quality monitoring in San Francisco show that there have been occasional local exceedences of state and Federal CO and PM_{10} standards, largely due to air pollutant emissions from within the City. CO is a non-reactive air pollutant, the major source of which is motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion. Particulate levels are relatively low near the coast, increase with increasing distance from the

coast, and peak in dry, sheltered valleys. The primary sources of particulates in San Francisco are construction and demolition, combustion of fuels for heating, and vehicle travel over paved roads.[2]

San Francisco, like all other sub-regions in the Bay Area, contributes to regional air quality problems, primarily O_3, in other parts of the Bay Area. Ozone is not emitted directly from air pollutants sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbons (HCs) and nitrogen oxides (NO_x), which are carried downwind as the photochemical reactions occur. Ozone standards are violated most often in the Santa Clara, Livermore and Diablo Valleys, because local topography and meteorological conditions favor the build-up of ozone precursors there.

In 1990, emissions from motor vehicles were the source of 92 percent of the CO, 53 percent of the HCs, 7 percent of the PM_{10}, 90 percent of the sulfur oxides (SO_x) and 74 percent of the NO_x emitted in San Francisco.[3] These percentages are expected to apply reasonably well to current conditions, although the amount of pollutants emitted may have changed.

The 1977 Federal Clean Air Act required that regional planning and air pollution control agencies prepare a regional Air Quality Plan to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards within the deadlines specified in the Clean Air Act. For the Bay Area Air Basin, the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), and the BAAQMD jointly prepared a *Bay Area Air Quality Plan* in 1982 which predicted attainment of all national clean air standards within the basin by 1987.[4] However, violations of the national hourly O_3 standard in the basin have occurred on the average of two days per year in the last three years, and the Federal eight-hour CO standard continues to be violated in certain areas throughout the air basin, mainly in San Jose and Vallejo. Therefore, the San Francisco Bay Area Air Basin is still considered a non-attainment area for O_3 and CO.

The 1989 California Clean Air Act (AB 2595) and Federal Clean Air Act Amendments of 1990 both require development of air quality plans and strategies to reduce O_3 and CO levels in the Bay Area. As a result, a more recent *Bay Area Clean Air Plan* was prepared in 1991, which mandates a 5 percent per year air quality improvement. Attainment of air quality standards in the Bay Area has not yet occurred, since emissions reductions as required by the *1991 Clean Air Plan* are partially offset by new emissions from population and industry growth in the basin.

The *1991 Bay Area Clean Air Plan* contains specific measures aimed to reduce indirect sources of emissions, including transportation control measures designed to reduce the contribution of the automobile as the single-most important contributor to degraded air quality. Any project which attracts automobile traffic, such as a new office building, must promote or facilitate a mode shift away from the single-occupant automobile as the primary means of transportation.[4]

IMPACTS AND MITIGATION

Significance Criteria

The project could be considered to have a significant impact if it would cause CO levels at local intersections to exceed state (20 ppm) or Federal (35 ppm) one-hour or eight-hour (9 ppm) standards; contribute one percent or more of countywide emissions in the year 2000 for hydrocarbons, nitrogen oxides, carbon monoxide, PM_{10}, or sulfur oxides; result in a net increase of combined mobile and stationary source of 150 pounds per day of hydrocarbons, nitrogen oxides, sulfur oxides or respirable particulates.

Impacts

Impact H.1: Construction activities associated with the project would generate dust, which includes the respirable fraction known as PM_{10} (particles 10 microns or less in diameter). This would be a short-term adverse impact. (Not Significant)

Project construction would generate short-term air emissions of dust from demolition and surface disturbance, from exhaust from construction equipment and vehicles, and from off-site trucks hauling steel, concrete, or other building materials. This impact would tend to be more of a nuisance, especially from dust soiling, rather than creating measurably unhealthful impacts. The extent of these dust emissions would vary depending on the type of activity and the ambient conditions.

Construction activity would temporarily raise dust levels in the project area. To estimate dust emissions, the California Air Resources Board uses a universal total suspended particulate (TSP) emission factor of about 110 pounds per acre per day of disturbance if no supplemental dust control measures are used.[5] Dust control levels of 50 percent are typically achieved with standard construction dust abatement practices. Assuming standard dust control practices (such as regular watering of exposed surfaces and covering stockpiles and haul trucks) would be used at the 2.6-acre project site, TSP emissions of about 140 pounds per day are predicted during the

early phases of construction. This 140 pounds per day of dust represents dust particles of 30 microns or less in diameter. Human breathing passages filter out most particulate matter greater than 10 microns in diameter. The 10-micron or less diameter fraction of TSP, called PM_{10}, is about one third of the TSP in areas of "fresh" dust generation. Daily PM_{10} emissions during construction would therefore be about 50 pounds. According to studies conducted by the BAAQMD, violations of PM_{10} standards have occurred in San Francisco. The excavation associated with the new construction of the project could contribute temporarily to the emission of PM_{10} in the City to a small degree. Such emission may lead to an increase in the frequency of particulate standard violations. Fifty pounds per day of PM_{10} is less than the BAAQMD threshold of significance of 150 pounds per day and project effects would not be significant. Construction activities may exacerbate existing area-wide violations of PM_{10} standards and contribute to significant cumulative effects. See Impact H.5, below.

In addition to small dust particles that remain suspended in the air for extended periods, construction activities also generate large particles that readily settle after leaving the construction site. These large particles are chemically inert and are readily filtered out by human breathing passages. Thus, the dust emissions would generally comprise more of a dust nuisance as they settle out on parked cars or landscaping, rather than any adverse health impact.

Impact H.2: During construction activities, equipment exhaust would be generated, contributing to air quality emissions. (Not Significant)

Similar to dust emissions, the activity level of construction equipment would be related to the size of the proposed structure and the area under construction. Construction activities would cause combustion pollutants to be released from heavy-duty, on-site equipment and from off-site trucks hauling steel, cement or other building or demolition materials. Equipment exhaust emissions were calculated, based on California Air Resources Board estimates, that 300,000 brake-horsepower-hours (BHP-HR) of equipment operations would be required per acre developed as part of this project. Assuming that site build-out would occur in 300 workdays and that all the on-site equipment would be diesel-powered, the following average daily emissions would be generated during construction:

Carbon Monoxide	1.9 lb/day
Reactive Hydrocarbons	0.6 lb/day
Nitrogen Oxides	8.6 lb/day
Sulfur Dioxides	0.6 lb/day
Total Particulates	0.3 lb/day

The mobile nature of these sources, especially the on-road trucks, would tend to disperse these emissions widely in space and time. While the cumulative emissions would be somewhat more substantial over the entire construction period, the hourly or daily emissions would not be expected to result in violations of air quality standards. The existing baseline levels of primary construction equipment emissions, such as CO and NOx, are below ambient air quality standards in the project area, and the local air basin could accommodate the additional temporary project emissions with no measurable degradation in area air quality.

Construction activities could also result in indirect, off-site effects if construction activity were to impede off-site traffic through detours, lane closures, large parked vehicles in or near off-site travel lanes, etc. Indirect effects could also include dirt or debris spillage from haul trucks, potentially causing nuisance conditions on roadways along the construction access routes.

Impact H.3: Traffic generated by the proposed project would incrementally increase regional vehicular emissions, but would not result in emissions exceeding the BAAQMD significance thresholds. (Not Significant)

Mobile source pollution changes on an areawide basis would result from changes in travel volumes on local streets around the project vicinity, as well as from new travel to the expanded office complex. To estimate the regional emissions, the project traffic was related with emission factors supplied by the BAAQMD (draft EMFAC7F, June 1993) for the year 1995, with an average speed of 25 miles per hour. The estimated daily emissions for traffic-related sources are shown in Table 11.

The project's contribution to the total air basin emissions would be well below the threshold established by the BAAQMD defining a potentially significant impact on air quality for all pollutants except carbon monoxide (CO). Daily emissions in excess of the CO threshold of 550 pounds per day require a microscale ("hot spot") impact analysis to determine significance (see Impact H.4, below). While not quantifiable, the project might contribute to decreased air quality emissions as a result of consolidation of state employees at a Civic Center site well served by public transit.

TABLE 11: ESTIMATED DAILY REGIONAL EMISSIONS FROM PROJECT-RELATED TRAFFIC

Pollutant	Project Emissions/a/	Significance Threshold/b/
Carbon Monoxide	853 lb/day	550 lb/day/c/
Reactive Hydrocarbons/d/	69 lb/day	150 lb/day
Nitrogen Oxides	77 lb/day	150 lb/day
Sulfur Oxides	5 lb/day	150 lb/day
Particulate Matter	17 lb/day	150 lb/day

/a/ Based on composite EMFAC7F emission factors for 1995 from Bay Area Air Quality Management District, June 1993.
/b/ Bay Area Air Quality Management District, 1985. *Air Quality and Urban Development, Guidelines for Assessing Impacts of Projects and Plans.*
/c/ Emissions exceeding this threshold require a micro-scale impact analysis to determine significance.
/d/ Reactive hydrocarbons are assumed to be about 92% of total hydrocarbons.

SOURCE: Orion Environmental Associates, 1994

Impact H.4: Traffic generated by the project would result in incremental increases in localized carbon monoxide concentrations but would not contribute substantially to existing or projected violations of air quality standards. (Not Significant)

Within the Civic Center vicinity, the proposed project would increase the traffic on the local roadway system. These vehicles would slightly worsen the Levels of Service (LOS) at several intersections, but traffic flow would remain at an acceptable level (see Section III.F, p. 121). Unacceptable LOS usually indicates traffic congestion and increased emissions from slow-moving cars. In this case, however, the traffic study indicates there would be little change in overall traffic flow due to the proposed project, and therefore, the project traffic would have little effect on local air quality.

To evaluate the potential for any measurable change in microscale air quality due to the proposed project, levels of carbon monoxide (CO) emissions were estimated at five intersections in the

vicinity of the project site for traffic conditions under the following scenarios: existing, existing plus project, and future with project conditions. Carbon monoxide was used to determine if there would be any microscale impacts or "hot spot" potential associated with project implementation.

Calculations of localized CO exposure at the edge of local area streets were made for eight-hour exposures with hourly concentrations estimated using a persistence factor of 0.7, as recommended by Caltrans for urban locations.[6] The local eight-hour contribution was calculated based on project-generated traffic and published emissions factors and then normalized to measurements at the intersection of Sixth and Brannan Streets. (Monitoring at Sixth and Brannan was considered to represent CO levels generated by traffic at a major freeway access point.) The local contribution was then added to the observed background CO level from the nearby Ellis Street BAAQMD station to obtain a total exposure. Future background CO levels were estimated using a modified linear rollback (MLR) model to project 1992 baseline levels to the years 1994 and 2000. Background CO levels for 1992 determined from the BAAQMD monitoring data were 10 parts per million (ppm) for the one-hour exposure and 7.4 ppm for the eight-hour exposure. The corresponding levels for the existing scenario (1994) were calculated to be 9 ppm for one-hour and 6.9 ppm for eight hours. The year 2000 background levels, based on an MLR assumption of a 26 percent reduction in regional CO emissions between 1992 and 2000, were 7 ppm for one hour and 5.4 ppm for the eight-hour calculation. Results for the hourly and the eight-hour CO exposures are shown in Table 12.

Calculations for CO emissions were based on traffic volumes calculated for the PM peak traffic hour and early morning meteorological conditions, when maximum stagnation occurs. Traffic counts taken during the AM peak hour showed slightly less congestion (fewer cars and less congested traffic conditions), so that use of the PM traffic data would slightly over-estimate the microscale CO exposure.

As shown in Table 12, existing one-hour CO concentrations would be unaffected by project implementation (to the nearest whole ppm). The projected future plus project scenario indicates that hourly CO concentration would be less than existing levels at all analyzed intersections; this reduction can be attributed to declining background CO levels, limited additional congestion, and cleaner future car emissions. For all scenarios, there would be no violations of the one-hour standard for any of the intersections.

TABLE 12: ESTIMATED CARBON MONOXIDE LEVELS AT KEY INTERSECTIONS[a]

Intersection	Existing	Existing with Project	Future with Project
One-Hour (Standard = 20 ppm)			
McAllister/Van Ness	10	10	8
McAllister/Polk	10	10	7
McAllister/Larkin	10	10	8
Market/Van Ness	11	11	8
Market/Larkin/Ninth	11	11	8
Eight-Hour (Standard = 9.0 ppm)			
McAllister/Van Ness	7.9	7.9	6.0
McAllister/Polk	7.4	7.4	5.7
McAllister/Larkin	7.5	7.5	5.8
Market/Van Ness	8.0	8.0	6.1
Market/Larkin/Ninth	8.0	8.0	6.0

/a/ Parts per million, based on microscale impacts normalized to measurements at 6th and Brannan with Modified Linear Rollback on background concentrations calculated from updated Table V-B-2 in California Air Resources Board EMFAC7F (June 1993). Background CO concentrations for existing conditions were calculated based on 1992 BAAQMD monitoring data, when the maximum one-hour background was 10 ppm and the eight-hour background was 7.4 ppm. The existing and future background levels were calculated using the Modified Linear Rollback assumption of an 8 percent reduction in regional CO emissions by 1994 and a 26 percent reduction by 2000. Emission rates were based on California Air Resources Board EMFAC7F (June 1993).

SOURCE: Orion Environmental Associates, 1994.

For the eight-hour CO concentration, the calculated CO values similarly indicate that levels would be below the 9 ppm standard at any of the analyzed intersections. Project-related traffic would create less than a 0.1 ppm increase in the microscale CO exposure. The microscale impact of project implementation would therefore be less-than-significant.

Impact H.5: Particulate emissions resulting from construction and from vehicle trips generated by the project and cumulative development would increase particulate concentrations, which could increase the frequency of particulate standard violations in San Francisco. (Significant)

While project construction and operation would not generate PM_{10} (particulate) in excess of significance threshold, the project would contribute to cumulative levels of particulates that could lead to violation of the standard in San Francisco, with concomitant health effects and reduced visibility. This would be an unavoidable cumulative significant effect.

Mitigation

Mitigation H.1: To assure that construction-related dust emissions are maintained at a less-than-significant level and to reduce overall levels of dust emissions, the project would include a dust control program that includes the following measures:

H.1.a. Regular watering of disturbed soil (at least twice per day);

H.1.b. Misting or covering stockpiles if left unattended for more than 24 hours.

H.1.c. Washing construction site access points to public streets and haul-truck tires at the conclusion of each workday;

H.1.d. Sweeping surrounding streets during demolition and excavation at least once per day.

H.1.e. Proper haul truck loading and covering.

The project would consider use of non-potable water for dust control. Ordinance 175-91, passed by the Board of Supervisors in 1991, requires that non-potable water be used for dust control activities. Therefore, the project could require that the contractor(s) obtain reclaimed water from the San Francisco Clean Water Program for this purpose.

Significance After Mitigation: **Less-than-significant**

Mitigation H.2: All on-site construction equipment shall receive a low-NOx tune-up prior to use at the site and would be re-tuned after 90 days on the job site. Trucks or other equipment shall not be left to idle continuously for more than 10 minutes while waiting to load or unload.

Significance After Mitigation: **Less-than-significant**

Mitigation H.3 and H.4: The project would include a standard state transportation coordination program to reduce single-occupancy vehicles and concomitant air quality emissions (see Traffic, Transit, Parking and Circulation, pp. 121).

Significance After Mitigation: **Less-than-significant**

Mitigation H.5: Mitigation H.1 would reduce project contribution to particulate emissions. Cumulative development effects on particulate emissions would continue to be significant.

Significance after Mitigation: **Significant**

NOTES - Air Quality

[1] California Air Resources Board, Air Quality Data Summaries, 1988-1992.

[2] California Air Resources Board, Air Quality Data Summaries, 1988-1992.

[3] California Air Resources Board, Air Quality Data Summaries, 1988-1992.

[4] Association of Bay Area Governments (ABAG), BAAQMD, and MTC, *1982 Bay Area Air Quality Plan*, December 1992.

[5] California Air Resources Board, Air Quality Data Summaries, 1988-1992.

[6] ABAG, BAAQMD, and MTC, *1991 Clean Air Plan*, 1991.

I. GEOLOGY AND SOILS

SETTING

Regional Geology

The project site is located near the northern tip of the San Francisco Peninsula, within the California Coastal Ranges Province. This province is characterized by northwest-trending ridges and valleys that generally parallel the major geologic structures of the region, such as the San Andreas Fault system. The Coast Ranges Province is bound by the Pacific Ocean on the west and the broad Central Valley on the east.[1,2]

Bedrock is composed of highly consolidated and tectonically deformed sedimentary, volcanic, and metamorphic rocks of the Franciscan Assemblage that is Jurassic to Cretaceous in age. Rocks of the Franciscan Assemblage commonly consist of pervasively sheared shale and sandstone which includes isolated masses of other types of rocks; these sheared rocks are referred to as melange. Large bodies of serpentinite, an asbestos-containing rock, are also associated with the Franciscan Assemblage. The intense deformation and shearing that is typical of the Franciscan melange and serpentinite occurred in extensive ancient thrust fault zones as the North American Plate was thrust over the Farallon Plate during Mesozoic and early Tertiary time. During early Tertiary time, plate convergence and under thrusting were replaced by dextral strike slip faulting along the continental margin. This style of faulting continues in the active San Andreas Fault System.

The bedrock surface has been eroded, is irregular, and is covered by large areas of unconsolidated sediments of the Pleistocene to Quaternary age. These sediments include colluvium, alluvium and Dune Sand. Locally, more consolidated sediments of the Colma Formation form deeper cover in lower areas. Bedrock is locally exposed in the upland areas. Manmade fill of highly variable quality and density cover large portions of the low-lying areas and often overlie unconsolidated Quaternary sediments.

Site Geology

The ground surface at the proposed project site is sloping with elevations ranging from 53 ft. (at the southeast corner) to 66 ft. (at the northwest corner) San Francisco Datum (SFD).[3] The proposed project site is immediately underlain by fill which is underlain by Dune Sand which is in turn underlain by the Colma Formation. Bedrock of the Franciscan Assemblage is the deepest

unit. The fill is described as very loose to medium dense, fine to medium grained sand. It probably originated from the Dune Sand in the area prior to development. The bottom of the fill ranges in elevation from 37 to 52 ft. at the California State Building.

The Dune Sand is comprised of wind deposited, fine to medium grained clean sand. It is typically medium dense in the upper few feet and dense to very dense below. The underlying Colma Formation was only encountered in borings drilled near the northwest corner of the California State Building. This unit is typically fine to medium grained clayey sand that is dense to very dense. The Colma Formation was encountered at depths up to 120 ft., the deepest boring drilled for the geotechnical investigation at the California State Building.

Bedrock of the Franciscan Assemblage, consisting of deeply weathered sandstone and claystone, was encountered at a depth of about 180 ft. (elevation - 117 ft.) in a geotechnical boring drilled for the San Francisco Courts Building site across Polk Street to the west.[4] A seismic hazard analysis report prepared for the proposed project reports that bedrock is present at an approximate depth of 110 ft.[5]

Groundwater

Groundwater was encountered in the geotechnical borings drilled at the California State Building at elevations of approximately 35 to 39 ft. SFD, or about 18 to 22 ft. below grade, in 1991 after a five-year drought period.[6] The groundwater elevations were similar in 1992 after one year of near normal rains. The geotechnical report for the San Francisco Main Library[7] two blocks to the southwest indicates that groundwater levels have fluctuated significantly in the vicinity of the proposed project site. Groundwater elevations as high as 40 ft. SFD have been reported at the proposed project site and during construction of the Annex in the mid-1950's, groundwater was reported to enter the site from Golden Gate Avenue at an elevation of about 36 ft. SFD.

Groundwater levels in borings drilled at the San Francisco Courts Building site, west of the project site were reported at 17 to 23 ft. below ground surface in 1993.[8] Groundwater elevations measured during the 1990 geotechnical investigation for the San Francisco Main Library, ranged from 23 to 30 ft. Those water levels were obtained during the dry season after a four-year drought. The groundwater elevations were expected to be higher during the wet season and after periods of normal rainfall. The consultant recommended that an elevation of 40 ft. be considered

the high water level for design purposes at the San Francisco Main Library.[9] Groundwater flow directions are reported to range from the south to southeast in the project vicinity.[10]

Seismicity

The distribution of earthquakes in Northern California is strongly influenced by the major active faults in the region. The California Division of Mines and Geology (CDMG) and the U.S. Geological Survey (USGS) have catalogued active faults in California that are considered capable of producing large to major earthquakes (greater than Richter magnitude 6.0). The closest active faults to the proposed project are the San Andreas Fault (approximately eight miles to the southwest), the San Gregorio Fault (approximately 12 miles to the southwest), and the Hayward and Calaveras Faults (about 13 and 25 miles to the east, respectively). The San Andreas and Hayward Faults are the most critical to San Francisco. There are no active faults mapped within the City of San Francisco.[11]

The San Andreas Fault is the closest to the proposed project and is most likely to cause damage within the City. Two separate segments of the San Andreas Fault experienced rupture in 1857 and 1906; the 1906 earthquake occurred about seven miles southwest of the proposed project site and had a magnitude of 8.3. These areas currently have low seismic activity but are believed to be future sources of great earthquakes with magnitudes close to 8.0.[12] The October 17, 1989 Loma Prieta earthquake occurred on the Santa Cruz subsegment of the San Andreas Fault about 60 miles southeast of the proposed project site and had a magnitude of 7.1. The USGS estimates that there is a 23 percent chance of an earthquake with a magnitude of 7.0 occurring along one of the three active segments of the San Andreas Fault within the next 30 years. The maximum credible earthquake on the San Andreas Fault is expected to have a magnitude of 7.8 based on modelling performed for the seismic retrofit study for the California State Building; however, the CDMG mandates a maximum credible earthquake of 8.0 on this fault.[13]

The Hayward Fault is an active branch of the San Andreas Fault system. The most active portion of the fault extends from Fremont to Point Pinole near Richmond. Two separate segments of the fault experienced rupture in 1836 and 1868; the magnitude of these earthquakes was about 7. The USGS estimates that there is a 44 percent probability of an earthquake with a magnitude of 7.0 occurring along this fault zone within the next 30 years. The maximum credible earthquake on the Hayward Fault is expected to have a magnitude of 7.0 based on modelling performed for the seismic retrofit study for the California State Building. However, the CDMG mandates a maximum credible earthquake of 7.5 on this fault.[14]

The Calaveras Fault zone is also a branch of the San Andreas Fault zone. Geodetic information indicates that this fault zone should not accumulate enough strain to generate an earthquake with a magnitude greater than 6.0 to 6.5.[15]

Geologic Hazards

There was no major damage to structures in the vicinity of the proposed project site due to ground failure from the 1906 or 1989 earthquakes. Most structural damage occurred from ground shaking.[16] During the Loma Prieta earthquake, most of the damage in San Francisco was sustained in the Marina and the South of Market Districts that are built on large quantities of fill materials. These areas experienced liquefaction and ground settlement which resulted in major structural damage to numerous buildings and ruptured utility lines which caused fires. In general, the damage was lighter in areas underlain by firmer soils. However, the earthquake did cause structural and nonstructural damage to several buildings in the Civic Center area. The California State Building was vacated because of damage that was sustained during that earthquake. The primary damage occurred at the stairwells in the form of cracked plaster and hollow clay tile walls. In addition, some modern fluorescent lighting fixtures fell. After the earthquake, the State made the decision to vacate that building and moved its offices elsewhere. The Annex remains occupied. The Main Library was temporarily closed after the earthquake because book stacks on the building's north side were loosened but the building sustained no structural damage. City Hall and City offices at 450 McAllister Street sustained no structural damage and remained open.[17]

The type of damage caused by the Loma Prieta earthquake is typical of moderate-sized earthquakes. Damage that occurred at distances of up to 50 miles from the epicenter is evidence that the proposed project may be adversely affected by earthquakes occurring on any of the region's major faults. An earthquake of similar or larger magnitude could occur again on the San Andreas, Hayward, Calaveras or other Bay Area faults. The Mission Bay EIR analyzes the seismic impacts for an 8.4 magnitude earthquake on the San Andreas Fault, a 6.9 magnitude earthquake on the Hayward Fault, a 7.3 magnitude earthquake on the Calaveras Fault and an 7.1 earthquake on the San Gregorio Fault. The damage conditions described in that EIR are generally greater than what were experienced during the Loma Prieta earthquake. Other active faults in the region could produce smaller earthquakes.[18]

The primary concerns related to seismic activity include ground shaking from future earthquakes and secondary effects; the potential for fault rupture at the site is low because no active faults cross the site. Site specific seismic hazards are addressed in a preliminary seismic hazard analysis prepared for the California State Building. The secondary effects from ground shaking include liquefaction and differential compaction. Other hazards related to earthquakes that were considered include landsliding, subsidence, tsunami inundation, and inundation from reservoir failure; these hazards are considered to be absent at the proposed project site.[19]

Qualitatively, the estimated intensity of future ground shaking at the proposed project site is very strong on a scale of "weak", "strong"," very strong", "violent", and "very violent".[20] On the basis of this scale, the proposed project site would be expected to experience very strong ground shaking during a major earthquake. With this intensity of shaking, masonry buildings would be expected to be badly cracked and frame buildings on weak underpinning would be expected to lurch. Some masonry or frame buildings may collapse. The estimated intensity is based on an earthquake of similar magnitude and location of the 1906 earthquake.

Liquefaction occurs when a saturated cohesionless soil, such as sand, is subjected to a shock and experiences an increase in pore water pressure. The soil loses a substantial amount of strength and may collapse. Potential consequences of liquefaction include the loss of bearing capacity, differential settlement and lateral spreading; these can cause serious building foundation failures and naturally buoyant structures such as underground storage tanks may be raised above ground.

Liquefaction more commonly occurs in looser saturated materials such as the fill sand identified at the site; dense to very dense sand such as the Dune Sand is less susceptible to liquefaction. Saturated sands at the San Francisco Courts building site to the west are dense to very dense and the potential for liquefaction is considered low. Liquefaction was not reported in the vicinity of the project site during the 1906 or 1989 earthquakes and the project site is outside of any areas designated as potentially liquefiable.[21] The hazard due to liquefaction at this site is very minor. Only settlement up to one-quarter inch due to liquefaction would be expected.[22]

Subsidence and differential compaction could also occur in loose to medium dense sands whether saturated or not. Only about one-quarter inch of differential settlement could occur in the dry sands underlying the site due to ground shaking.[23]

IMPACTS AND MITIGATION

Significance Criteria

Geology and soils impacts would be considered significant if they cause settlement or damage of adjacent structures or streets as a result of excavation or other construction activities. They are also considered significant if people or structures are exposed to major geologic hazards.

Impacts

Impact I.1: Excavation associated with the project could create safety risks to workers and to adjacent structures. However, the project would comply with all applicable health and safety regulations regarding excavation and shoring. (Not Significant)

Construction of the New State Office Building and renovation of the California State Building would likely involve subgrade excavation for construction of a foundation and basement(s). During excavation there is the potential for collapse of the excavation sidewalls which could endanger the safety of the construction workers and threaten nearby structures. The workers would be threatened by engulfment in the event that the excavation sidewalls collapsed. They could also be injured by falling debris.

However, it is assumed that all excavations would comply with applicable state and Federal safety regulations including current Federal Occupational Health and Safety Administration excavation and trench safety standards. The contractor(s) would be responsible for establishing the appropriate safety procedures for the excavation project. The contractor(s) would also establish a minimum lateral distance from the crest of the slope for all vehicles and spoil piles, establish protective measures for exposed slope faces and evaluate the soil exposed in the excavation as part of the contractor's safety procedures.

Impact I.2: Excavation for the project might cause settlement of adjacent streets and structures. (Potentially Significant)

Because of the presence of cohesionless sand at the project site, it is likely that settlement could occur during subgrade excavation, in the absence of proper geotechnical controls. Settlement of existing buildings at the proposed project site as well as streets and buildings in the proposed project vicinity could also occur during excavation of the site. The project would follow the

recommendations in a final geotechnical report for shoring of excavation walls and underpinning of structures (see Mitigation Measure I.2).

Impact I.3: Because of shallow groundwater at the site, it is likely that dewatering would be required for subgrade excavation. Dewatering of the site could cause settlement in the vicinity of the proposed project, resulting in damage to adjacent structures or streets. (Potentially Significant)

Construction of the mat foundation for the New State Office Building would require excavation below the water table. Deep wells are not the preferred recommended dewatering methods. Nevertheless, settlement of adjacent streets, utilities and buildings could potentially occur as a result of dewatering at the site depending on the extent and duration of dewatering; dewatering is expected to occur over a six-month period.

Impact I.4: The seismic upgrade of the California State Building and the construction of the New State Office Building would reduce the risk of seismic hazards to people and structures in the event of an earthquake. (Not Significant)

During an earthquake, glass, and in some cases building cladding, could endanger those on the streets and sidewalks. However, new buildings are subject to more stringent building and structural standards than older buildings which would reduce the severity of this impact. The new and remodeled buildings would be more resistant to earthquake damage than the existing buildings.

The renovation of the California State Building and design and construction of the New State Office Building would meet, or exceed, the seismic force resistance requirements of the 1994 *Uniform Building Code* and would meet the structural standards of Title 24 of the California Code of Regulations and the State Historical Building Code. The seismic criteria would, however, exceed the structural requirements of the State Historical Building Code by itself. Seismic design criteria for the California State Building and the New State Office Building have been established using the Seismic Performance Goals contained in the "Policy on Acceptable Levels of Earthquake Risk in State Buildings," a report by the California Seismic Safety Commission dated January 1992. The goals for the lower and upper design response spectra are as follows:

> "Lower Level Design Response Spectra" (72-year return period): Immediate occupancy, minimal post-earthquake disruption, some non-structural clean-up required.

"Upper Level Design Response Spectra" (475-year return period): Repairable damage, some structural and non-structural damage, will not significantly jeopardize life.

The upgrade of the California State Building would include fixed-base concrete shear wall system using both interior and exterior shear walls; the existing floor slabs, foundation and historic stone clad facades would also be strengthened. To ensure safety at exit routes, the hollow-clay tile materials surrounding the existing stair and elevator shafts would be replaced with new materials. Hollow-clay tiles along outer walls would be stabilized. The proposed seismic renovation of the California State Building would result in a structure meeting the same current seismic standards as would the proposed New State Office Building. Design of the New State Office Building would also include a fixed-base system with a structural-steel moment-resisting frame with passive energy dissipation elements for the resistance of seismic loads. The entire structure would be founded on a six-foot thick concrete mat foundation. The new and remodeled buildings would be more resistant to earthquake damage than the existing California State Building.

The project would increase the on-site daytime population compared to existing conditions and there would be more people subject to potential danger during a major earthquake. This population would contribute to traffic and pedestrian congestion and this, along with the debris in the streets, would impede the access of emergency services responding to fire and other earthquake-related emergencies.

<u>Mitigation</u>

Mitigation I.1: No mitigation is required for Impact I.1 for safety hazards.

Mitigation I.2: A final geotechnical report would be prepared that would specify appropriate methods for shoring and mitigation of settlement outside of excavation. Project contractor(s) would follow the geotechnical engineer's recommendations for shoring of the excavation to reduce the potential for collapse of the excavation sidewalls. Structures adjacent to the excavation, including the California State Building, should be underpinned to reduce the potential for settlement. The structures would also be monitored during construction for settlement and additional mitigation measures would be implemented if settlement were identified. The contractor would be required to comply with all recommendations in the final geotechnical report.

The preliminary geotechnical recommendations for the proposed project include shoring of all vertical faces of site excavation using tie-backs and/or internal bracing. The final method of

shoring selected would depend on the final project design. Pile driven foundation systems are not planned as part of the project.

The project would follow the final geotechnical engineer's recommendation for shoring of excavation walls. The shoring would be designed to resist restrained wall pressures as well as surcharge pressures from nearby sources such as improvements, vehicle loads and stockpiles. The contractor(s) would follow the geotechnical engineer's recommendations regarding design of this system.

Where structures that are sensitive to settlement are located near the excavation, including the California State Building, underpinning of the structures is recommended to prevent settlement. The project sponsor would ensure that the contractor follows the geotechnical engineer's final recommendation regarding underpinning of adjacent structures to reduce the potential for settlement during excavation. To monitor for movements during excavation, the project sponsor and contractor(s) would follow the geotechnical engineers' recommendations regarding establishing survey points on adjacent structures; the geotechnical engineer would designate which structures would require monitoring for settlement and/or underpinning. Shoring systems would be modified as necessary in the event that substantial movements were detected. This measure would be necessary to avoid a significant impact.

Significance After Mitigation: **Less-than-significant**

Mitigation Measure I.3: A final geotechnical report would be prepared including appropriate methods for dewatering during construction, methods for monitoring groundwater levels outside of the excavation, methods for monitoring settlement outside of the excavation, and mitigation measures to be followed in the event that the potential for settlement is identified. The contractor would be required to comply with all recommendations in the final geotechnical report.

The final geotechnical report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey were recommended, a Special Inspector would be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed outside of the excavation to monitor the level of the water table and other instruments would be used to monitor potential settlement and subsidence. If, in the

judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge could be used to halt this settlement.

Significance After Mitigation: **Less-than-significant**

Mitigation I.4: No mitigation is required for Impact I.4, for seismic conditions.

NOTES - Geology and Seismicity

1 Treadwell & Rollo, Draft Report, *Preliminary Geotechnical Investigation, Courthouse Building*. June 21, 1993.

2 Geo/Resource Consultants, Inc., Geotechnical Investigation Report, the Proposed San Francisco Main Library. December 17, 1990.

3 San Francisco Datum (SFD) established the City's zero point for surveying purposes at approximately 8.6 ft. above mean sea level.

4 Treadwell & Rollo, Inc., Draft Report, Preliminary Geotechnical Investigation, Courthouse Building, San Francisco, California. June 21, 1993.

5 Dames & Moore, Report, Site Specific Seismic Hazard Analysis, 350 McAllister State Office Building, San Francisco, California. December 30, 1991. Prepared for Harlan Tait and included as an appendix to their report Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

6 Treadwell & Rollo, Inc., Draft Report, Preliminary Geotechnical Investigation, Courthouse Building, San Francisco, California. June 21, 1993.

7 Geo/Resource Consultants, Inc., Geotechnical Investigation Report, the Proposed San Francisco Main Library, San Francisco, California. December 17, 1990.

8 Treadwell & Rollo, Inc., Preliminary Environmental Site Assessment, Superior Courthouse, San Francisco, California. December 9, 1993.

9 Geo/Resource Consultants, Inc., Geotechnical Investigation Report, the Proposed San Francisco Main Library, San Francisco, California. December 17, 1990.

10 This flow direction is based on the review of agency files for eight sites within 2,000 ft. of the proposed project, conducted by Orion Environmental Associates on July 8, 1994.

11 URS/John A. Blume and Associates, San Francisco Seismic Safety Investigation. June 1974.

12 Dames & Moore, Report, Site Specific Seismic Hazard Analysis, 350 McAllister State Office Building, San Francisco, California. December 30, 1991. Prepared for Harlan Tait and included as an appendix to their report Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

13 Dames & Moore, Report, Site Specific Seismic Hazard Analysis, 350 McAllister State Office Building, San Francisco, California. December 30, 1991. Prepared for Harlan Tait and included as an appendix to their report Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

14 Dames & Moore, Report, Site Specific Seismic Hazard Analysis, 350 McAllister State Office Building, San Francisco, California. December 30, 1991. Prepared for Harlan Tait and included as an appendix to their report Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

15 Dames & Moore, Report, Site Specific Seismic Hazard Analysis, 350 McAllister State Office Building, San Francisco, California. December 30, 1991. Prepared for Harlan Tait and included as an appendix to their report Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

16 Treadwell & Rollo, Inc., Draft Report, Preliminary Geotechnical Investigation, Courthouse Building, San Francisco, California. June 21, 1993.

17 New Main Library Environmental Impact Report, certified, February, 1992.

18 New Main Library Environmental Impact Report, certified, February, 1992.

19 Harlan Tait Associates, Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

20 URS/John A. Blume and Associates, San Francisco Seismic Safety Investigation. June 1974.

21 URS/John A. Blume and Associates, San Francisco Seismic Safety Investigation. June 1974.

22 Harlan Tait Associates, Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

23 Harlan Tait Associates, Geotechnical Investigation, Seismic Retrofit, California Justice Center, 350 McAllister Street, San Francisco, California. December 21, 1992.

J. PUBLIC HEALTH AND SAFETY

SETTING

This section discusses the occurrence and potential impacts of hazardous substances at the project site due to previous land uses and from off-site sources. The evaluation of the potential presence of hazardous materials is based on the following information: (1) review of existing site history, site investigation reports and asbestos surveys; (2) review of historical information developed as part of the cultural resources section of this EIR; and (3) review of local agency files to characterize potential hazardous waste sites identified within approximately 2,000 ft. of the proposed project.

Background

Hazardous materials are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. As defined in Title 22 of the California Code of Regulations, Division 4.5, Chapter 11, Article 3, hazardous materials are grouped into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials) and reactive (causes explosions or generates toxic gasses). Hazardous materials have been and are commonly used in commercial, agricultural and industrial applications as well as in residential areas to a limited extent. If improperly handled, they can result in public health hazards if released to the soil or groundwater or through airborne releases in vapors, fumes, or dust.

Hazardous Materials Regulation

Hazardous materials and hazardous wastes are extensively regulated by Federal, state, regional, and local regulations, with the major objective of protecting public health and the environment. In general, those regulations provide definitions of hazardous substances; establish reporting requirements; set guidelines for handling, storage, transport, remediation and disposal of hazardous wastes; and require health and safety provisions for both workers and the public.

The major agencies enforcing these regulations include the U.S. Environmental Protection Agency (Federal); the Department of Toxic Substances Control and the California Regional Water Quality Control Board of the California Environmental Protection Agency (state); the Bay Area Air Quality Management District (regional); the San Francisco Department of Public

Health (local); and the San Francisco Fire Department (local). Appendix E presents a description of major hazardous materials regulations and the agencies implementing them.

Hazardous Building Materials

Some materials commonly used in older buildings could present a public health risk if disturbed during an accident or during demolition of an existing building. These materials include asbestos, electrical equipment such as transformers and fluorescent light ballasts that contain polychlorinated biphenyls (PCBs), fluorescent lights containing mercury vapors, and lead-based paints. Asbestos and lead-based paint may also present a health risk to existing building occupants if they are in a deteriorated condition. If removed during demolition of a building, these materials would require special disposal procedures. Asbestos surveys have been conducted for both the California State Building and the Annex. Samples of potential lead-based paint from the California State Building have also been analyzed. However, no surveys have been performed for other hazardous building materials potentially present in the two buildings.

During the past 50 years, asbestos has been used as a common building material, in insulation, shingles and siding, roofing felt, floor tiles, and acoustical ceiling material.[1] Asbestos is a known carcinogen, and the primary pathway of exposure is through inhalation; if asbestos is present in "friable" (i.e. crumbly) form, then asbestos fibers can be released and inhaled.

The asbestos surveys in the California State Building and the Annex included review of building plans to identify potential locations for asbestos-containing materials; visual inspection of accessible areas of each building to observe for the potential presence of asbestos-containing materials; and the collection and analysis of bulk samples of each potential asbestos-containing material identified. The location, condition and quantity of each type of asbestos-containing material were identified. These reports stated that a more detailed survey, including additional sampling, would be required prior to demolition of the buildings.[2,3]

Asbestos has been identified in both the California State Building and the Annex. In the California State Building, the primary asbestos-containing materials identified include acoustical plaster and ceiling materials; blown-in fire-proofing insulation; pipe, radiator and duct insulation; roofing materials; and vinyl floor tiles. Asbestos-containing materials identified at the Annex include dry-wall mud, various insulation and gasket materials, ceiling materials, vinyl floor tiles, window putty and fire insulation panels. Much of the material in both buildings is

reported to be in good condition. However, some of the material is reported to be in poor condition and could potentially release fibers.

PCBs were commonly manufactured and used in the United States between 1929 and 1977 for uses such as electrical transformers and capacitors and fluorescent light ballasts.[4] PCBs are a highly toxic group of substances that persist in the environment, accumulate in biological systems, interfere with reproduction and act as an immuno-suppressant. Under the Toxic Substances Control Act, Congress specifically regulated the use of PCBs. The manufacture, processing, and commercial distribution or use of any PCB was prohibited in January 1978, except when contained in a totally enclosed manner. As of January 1979, the manufacture of PCBs was banned, and the distribution of PCBs in commerce was banned in July 1979. However, utilities and other owners of PCB-filled electric transformers and capacitors were allowed to maintain the equipment for its working life, if it did not leak. The EPA Spill Cleanup Policy dictates that spills of materials containing PCBs at concentrations of 50 parts per million (ppm) or greater be cleaned up within 48 hours after the spill.

Most fluorescent light ballasts manufactured prior to 1978 contain approximately 0.5 ounces of PCBs in a small capacitor;[5] the quantity can be up to two ounces. Disposal of more than one pound of PCBs, or approximately 16 capacitors, to a landfill would require notification of the U.S. EPA under CERCLA. Ballasts manufactured after January 1, 1978, do not contain PCBs and should be labeled as such on the ballast.

Spent fluorescent light tubes commonly contain mercury vapors at levels high enough to be considered a hazardous waste under California law; depending on the levels of mercury present, the light tubes may also be classified as hazardous under Federal law.[6] When disposed of at a municipal landfill, the mercury can leach into the soil and groundwater. Existing regulations allow a generator to dispose of up to 25 fluorescent light tubes per day at a municipal landfill if the light tubes are not considered hazardous under Federal law. Disposal as a hazardous waste would be required if a larger quantity of lights is generated during replacement of existing lights or during a building demolition.

Lead-based paint was commonly used prior to 1960; the U.S. Department of Housing and Urban Development considers paint that contains greater than 5,000 parts per million (or 0.5 percent) of lead to be lead-based. Lead is toxic to humans, particularly young children, and can cause a range of human health effects depending on the level of exposure. When adhered to the surface

of the material they are painted to, lead-based paints pose little health risk. Where the paint is delaminated or chipped, the paint can cause a potential threat to the health of young children or other building occupants who may ingest the paint. Lead dusts could also present public health risks during demolition of a structure with lead-based paint. Lead-based paint that has separated from a structure may also contaminate nearby soil.

During the asbestos survey at the California State Building, 17 paint samples were collected and analyzed for lead. Eight of the samples contained lead in excess of 5,000 parts per million and would be considered lead-based.[7] The condition of the paint was not reported. Based on the lead levels identified in the paint, the survey report recommended a complete lead-based paint survey for the building.

Potential On-Site Sources of Hazardous Materials

The California State Building and the Annex occupy the block bounded by McAllister Street on the south, Polk Street on the west, Golden Gate Avenue on the north and Larkin Street on the east. Prior to construction of the California State Building in 1923 and construction of the Annex in 1957, the project site was occupied by numerous businesses, some of which may have involved the use of hazardous substances. If previously used at the site, hazardous materials could potentially have contaminated soil and/or groundwater through incidental spillage or poor house-keeping practices. The potential for contamination by hazardous materials at the proposed project site due to previous land uses has not been investigated through sampling.

Land uses from 1885 (the earliest information reviewed) through 1906 have the highest potential for contributing hazardous materials to soil at the site because all of these businesses were destroyed in the 1906 earthquake. As discussed in Cultural Resources, Section III.C, those land uses prior to 1906 that potentially involved the use of hazardous materials include laundries, coal yards, undertakers, an auto repair facility, a blacksmithing shop, a carriage paint shop, a hand-printing shop and a dyeing and cleaning plant. The hazardous materials associated with these types of land use include solvents, petroleum products, metals, formaldehyde, and other organic compounds.

Rubble from these businesses may have been mixed with the soil during site-clearing activities following the earthquake, and new buildings may have been constructed over the contaminated soil. Soil contamination associated with these land uses could be spread through much of the

proposed project site because of the earth-moving activities which took place during clean-up of the rubble from the earthquake and subsequent construction; if groundwater were contaminated, the contamination could similarly be spread through much of the site and potentially off-site. If soil was removed during construction activities subsequent to the earthquake, much of the potential contamination may have been removed.

Earthquake fill materials at the San Francisco Courts Building site, across Polk Street to the west of the proposed project site, has been determined to contain lead at levels which would classify the soil as a hazardous waste if it were removed and disposed of.[8] Lead from that site would be unlikely to affect soil quality at the proposed project site. Earthquake fill has not been identified at the project site. However, based on the site history, it may be present. Because similar types of debris would have been incorporated into the fill at both sites, lead levels could potentially be high in the earthquake fill at the proposed project site, if present. Other hazardous materials that have been identified in earthquake fill in San Francisco include polynuclear aromatic hydrocarbons (PNAs), petroleum hydrocarbons, heavy metals and semi-volatile organic compounds; site specific sampling would be required to identify whether these chemicals are present in fill materials at the project site.

Businesses which used hazardous materials on-site subsequent to 1906 could have contributed to soil contamination through their storage methods or incidental spillage. Those land uses subsequent to 1906 that potentially involved the use of hazardous materials include a printing shop, auto repair and wrecking facilities, a gasoline service station, paint shops, a vulcanizing plant, plumbing and heating shops, a machine shop, a forging company, a china enamel company and a sign company. The hazardous materials associated with these types of land use include solvents, petroleum products, polychlorinated biphenyls, metals and other organic compounds.

Historical uses of hazardous materials were not subject to the current level of regulation, and previous handling, storage, and management practices may have resulted in contamination of the soil or groundwater that has previously been unidentified. Soil contamination associated with these land uses would likely be restricted to areas close to the business where the hazardous materials were used; if groundwater were contaminated, the contamination could spread to other portions of the site and potentially off-site.

The known presence of hazardous materials at the California State Building and the Annex are related to three underground storage tanks at the site. Information regarding the underground

storage tanks and soil quality in the vicinity of the tanks was obtained from an underground storage tank assessment performed in 1992.[9] A diesel-fuel underground tank was installed in the former Redwood Street alley in approximately 1930. The tank is contained in a concrete vault and has been closed in place by filling with sand. The tank was closed prior to 1985 when the Office of the State Architect took responsibility for the tank.[10] A 10,000-gallon diesel-fuel underground tank was installed in the Annex parking garage entry area; the reported date of installation is 1959. This tank was used as a back-up for filling boilers at the California State Building. It is also contained in a concrete vault. In 1992 the tank was still in usable condition. The third tank is an oil tank in the basement of the California State Building; this tank was used to fuel the boiler. This tank is also contained in a concrete vault.

The 10,000-gallon tank is in use; however, there is no current permit to operate it.[11] Monitoring requirements for existing tanks include installation of automatic tank gauging and inventory reconciliation, with tank integrity testing annually or every two years. The tank was last tested was in 1990.[12]

Soil quality in the vicinity of the underground storage tanks in the loading dock and in the entry to the parking garage was assessed through soil borings. A geophysical investigation was conducted to locate the third tank in the basement of the California State Building but no sampling was conducted to evaluate soil or groundwater quality; the location of the tank was marked.

Two soil borings were installed adjacent to the tank in the alley and three soil borings were installed adjacent to the tank in the parking garage entry. During the drilling and soil sampling, no odors or soil staining were observed and soil samples from the borings did not contain detectable levels of total petroleum hydrocarbons such as diesel nor benzene, toluene, ethylbenzene and xylenes.[13] Soil samples from the borings adjacent to the second tank were also analyzed for oil and grease; none were identified. Those soil borings were drilled to a maximum depth of 20 ft. below ground surface at the first tank and to a maximum depth of 11 ft. at the second tank. At those depths, the soil became moist and the contractor believed that groundwater would be present immediately beneath the bottom of the boring. The contractor recommended that the State submit closure documentation for the underground storage tank in the loading dock to the appropriate regulatory agencies.

The borings installed adjacent to the tank in the parking garage were completed to depths shallower than the bottom of the underground storage tank; because of this, there could be soil or groundwater contamination present at the site which was not identified by the sampling. In addition, soil quality in the vicinity of the piping associated with that tank was not assessed. An additional soil boring and installation of a groundwater monitoring well was recommended by the contractor to assess soil and groundwater quality further. The contractor also recommended soil and groundwater sampling in the vicinity of the third tank in the basement of the California State Building. No additional investigation of the three tanks has been undertaken since the 1992 study.[14]

Potential Off-Site Sources of Hazardous Materials

Based on information for the San Francisco Courts Building site, there has been a release of waste oil from an underground storage tank at a gasoline station which previously occupied that site.[15] Total petroleum hydrocarbons as motor oil[16] has been identified in soil samples at the Courts site in concentrations from 135 up to 32,000 milligrams per kilogram (or parts per million); groundwater quality at this site has not been assessed. Based on the elevated levels of total petroleum hydrocarbons as motor oil present in the soil, it is possible that soil and/or groundwater quality at the proposed project site have been affected. The Courts site, located across Polk Street, may be approximately upgradient for groundwater movement of the proposed project site: a site specific groundwater gradient has not been determined.

The San Francisco Department of Public Health list of Local Oversight Facilities was reviewed to identify additional potential hazardous waste sites within approximately 2,000 ft. of the proposed project.[17] The sites identified on this list have typically experienced a leak of petroleum products from an underground storage tank. If groundwater quality has been degraded at any of these sites, they could potentially affect subsurface conditions at the proposed project site because groundwater plumes can migrate relatively long distances and affect adjacent and nearby land uses. This review identified eight sites within approximately 2,000 ft. of the proposed project. The site names and addresses are summarized in Table 13. The agency files for those sites were reviewed to assess potential effects on the subsurface conditions at the proposed project site from off-site sources of hazardous materials.

On the basis of the file information, each of the sites identified in Table 13 was evaluated for its potential to affect groundwater quality at the proposed project site. Sites that are adjacent to or

TABLE 13: POTENTIAL HAZARDOUS WASTE SITES WITHIN 2,000 FEET OF PROJECT SITE

Site No.	Site Name/Address	Incident	Soil Contamination	Groundwater Contamination	Potential to Impact Project Site	Comments
1	Wasserman Property 460 Eddy Street	Two 300-gallon USTs removed on 3/6/91	TPHg: 150 mg/kg Benzene: 0.29 mg/kg	TPHg: ND Benzene: ND T-1,2-DCE: 0.0002 mg/l C-1,2-DCE: 0.0053 mg/l Chloroform: 0.0012 mg/l 1,1,1-TCA: 0.0024 mg/l TCE: 0.0051 mg/l PCE: 0.03 mg/l	Low	Case closed. Occurrence of solvents not investigated, possible upgradient source. Site is located cross gradient from proposed project site.
2	P-Lot 99 Golden Gate Ave	One 4,000-gallon and one 2,000-gallon UST removed on 1/16/90	TPHg: 74 mg/kg Benzene: 0.021 mg/kg	TPHg: ND Benzene: ND	Low	Case closed. Site is located cross gradient from proposed project site.
3	San Francisco Fire Department Headquarters 260 Golden Gate Ave	Leak of two 1,000-gallon USTs indicated by inventory reconciliation report	NS	NS	Low	Letter from SFDPH indicates that an investigation was required in 1993; however, there is no indication in file that investigation was conducted. Site is located cross gradient from proposed project site.
4	California State Automobile Association 150 Hayes Street	Two 4,000-gallon gas USTs removed on 1/30/88. One 300-gallon waste oil UST removed 2/8/88. One 4,000-gallon gas UST removed 10/27/90.	NA	NA	Low	Case closed. Only limited data were available in files; no further investigation required by SFDPH and the RWQCB approved site as soils case only. Site is located downgradient of proposed project site.
5	APCOA & Fox Plaza 1390 Market Street	Soil investigation	TPHd: 490 mg/kg TPHg: 66 mg/kg Benzene: 6.9 mg/kg	TPHg: 590,000 mg/l Benzene: 32,000 mg/l	Low	Four inches of floating product identified in one groundwater monitoring well in 1986. Product not believed to be from site. Only limited information available in files. Site is located down gradient of proposed project site.

(Continued)

TABLE 13: POTENTIAL HAZARDOUS WASTE SITES WITHIN 2,000 FEET OF PROJECT SITE (Continued)

Site No.	Site Name/Address	Incident	Soil Contamination	Groundwater Contamination	Potential to Impact Project Site	Comments
6	Bank of America 1400 Mission Street	Four 10,000-gallon USTs removed	TPHg: 94 mg/kg TPHd: ND TPHmo: ND Benzene: 0.02 mg/kg	TPHg: ND TPHd: ND TPHmo: ND Benzene: ND	Low	Case closed. Site is located downgradient of proposed project site.
7	Chinese Community Housing Corporation 201 Turk Street	11 USTs removed, 500 to 7,100 gallons, waste oil, diesel, gasoline	TPHg: 13,000 mg/kg TPHd: 700 mg/kg Stoddard Solvent: 75,000 mg/kg PCE: 4.9 mg/kg 1,2-DCA: 2,100 mg/kg	TPHg: 3.6 mg/l TPHd: ND Stoddard Solvent: 0.9 mg/l Benzene: 0.150 mg/l PCE: 3.2 mg/l TCE: 0.067 mg/l 1,2-DCA: 0.2 mg/l	Low	Case closed. Upgradient source indicated. Site is located cross gradient from proposed project site.
8	Ford Motor Land Development Corporation 1000 Van Ness Avenue	Hydraulic lift. Six USTs removed 8/24/91	TPHho: 24,000 mg/kg TPHd: 13,000 mg/kg Benzene: ND	TPHd: ND Benzene: ND	Low	Site is located upgradient of the proposed project site.

Abbreviations:

1,1,1-TCA = 1,1,1-trichloroethane
1,2-DCA = 1,2-dichloroethane
C-1,2-DCE = Cis-1,2-dichloroethene
mg/kg = milligrams per kilogram, equivalent to parts per million
mg/l = milligrams per liter, approximately equivalent to parts per million
NA = Data were not available at time of file review
ND = Constituent was not detected in sample
NS = Soil or groundwater was not sampled
PCE = Tetrachloroethene
RWQCB = San Francisco Bay Regional Water Quality Control Board
SFDPH = San Francisco Department of Public Health
T-1,2-DCE = Trans-1,2-dichloroethene
TCE = Trichloroethene
TPHd = Total petroleum hydrocarbons identified as diesel
TPHg = Total petroleum hydrocarbons identified as gasoline
TPHho = Total petroleum hydrocarbons identified as hydraulic oil
TPHmo = Total petroleum hydrocarbons identified as motor oil
UST = Underground storage tank

SOURCE: Orion Environmental Associates, based on file review information obtained from the San Francisco Department of Public Health on July 8, 1994

upgradient of the proposed project site and have groundwater contamination would be considered to have a high potential for affecting groundwater quality at the proposed project site. Sites that are either cross or down gradient, and sites that do not have documented groundwater contamination are considered to have a low potential for affecting groundwater quality at the proposed project site. The reported direction of groundwater flow in this area is generally towards the southeast to south.

All of the sites identified in Table 13 are considered to have a low potential for affecting the project site. Groundwater quality at the one upgradient site has apparently not been affected; therefore it would not be expected that groundwater quality at the project site could have been affected by that site. The remainder of the sites are either cross or down gradient from the project site and would have a low potential for adversely affecting groundwater quality at the project site.

IMPACTS AND MITIGATION

Significance Criteria

An activity related to renovation or construction that could expose persons or the environment to hazardous materials or groundwater or soil containing hazardous materials at concentrations in excess of applicable state and Federal guidelines would have a significant effect.

Impacts

Impact J.1: During renovation and demolition activities, construction workers and the public could be exposed to airborne hazardous building materials. (Potentially Significant)

Asbestos-containing materials have been identified in both the California State Building and the Annex. If proper precautions were not taken during renovation of the California State Building and demolition of the Annex, asbestos fibers could be released to the air. Lead-based paint has also been identified in the California State Building. Depending on the condition of the paint, it could also become airborne. These airborne substances could cause potential health effects for both the workers and the public, as described in the Setting. The potential presence of lead-based paint in the Annex has not been addressed. (Regulations pertaining to asbestos and lead abatement are included in Appendix E.)

Other potential hazardous building materials that could be present in the buildings include fluorescent lights which may contain mercury vapors, fluorescent light ballasts which may contain polychlorinated biphenyls and other electrical equipment that may contain polychlorinated biphenyls. The project buildings have not been surveyed for these materials. These materials also pose health risks and could pose a threat to the environment if improperly disposed of at an unpermitted disposal site where the public could be exposed to the hazardous materials, or the hazardous materials could be released to the environment. If disposed of at a permitted facility, human contact with the hazardous materials would be prevented. The disposal facility would also have engineering controls which would prevent release of the hazardous materials to the environment.

If the asbestos and lead-based paint abatement activities or the removal of other hazardous building materials were improperly managed, site workers or the public could be exposed to hazardous materials either directly or indirectly, such as through off-site transport of dust and gasses. Potential health effects of these materials were described in the Setting.

Impact J.2: Based on previous land uses at the site, hazardous materials may be present in the soil and/or groundwater. This has not been evaluated through previous sampling, but must be investigated appropriately prior to project start-up. The presence of hazardous materials could present potential health and safety risks to construction workers and the public. (Potentially Significant)

The specific impacts associated with the presence of hazardous materials at the proposed project site cannot be fully evaluated because the types of hazardous materials present, if any, have not been identified. It would be necessary to conduct a soil and groundwater investigation at the proposed project site to identify any hazardous materials present. The investigation would be completed considering the access to the site through existing buildings. Potential sources of hazardous materials include previous land uses prior to and subsequent to 1906 and three underground storage tanks at the site. Soil quality due to previous land uses has not been assessed. Soil quality in the vicinity of one underground storage tank has been assessed, but soil quality has not been fully assessed at the remaining two underground storage tanks. Groundwater quality at the proposed project site has not been assessed.

If hazardous materials were identified in any samples, it would be necessary to notify the appropriate regulatory agency and to conduct additional investigation(s) to evaluate the extent of the chemicals identified. If chemicals are identified in the soil, the California Department of

Toxic Substances Control would normally provide oversight. If chemicals are identified in the groundwater, the San Francisco Bay Regional Water Quality Control Board would normally provide oversight. For projects under City of San Francisco jurisdiction, the San Francisco Bay Regional Water Quality Control Board has assigned oversight authority for fuel leak cases to the San Francisco Department of Public Health.

If additional investigation of hazardous materials present in the fill materials were required, the State Department of Toxic Substances Control would require a Preliminary Endangerment Assessment (PEA) as part of the site mitigation process "to determine whether current or past waste management practices have resulted in the release or threatened release of hazardous substances which pose a threat to public health or the environment."[18] The PEA is a standard approach for evaluating sites contaminated or potentially contaminated with hazardous substances to determine if a removal or remedial action is required to protect public health and the environment. It is the initial step in the overall site mitigation process to abate health or environmental threats posed by a site where hazardous substances have been released or have a significant potential to be released.

The Department of Toxic Substances Control provides oversight for the PEA process, including scheduling and fee requirements. The PEA process consists of an initial site evaluation and preparation of a PEA report, followed by an evaluation and approval of the PEA report by the Department of Toxic Substances Control. Depending on the results of the PEA, a Remedial Investigation/Feasibility Study (RI/FS) and a Remedial Action Plan (RAP) may eventually be needed for the site clean-up.

The PEA report would include the following information: a site description and site history, including a description of past and current site activities and a description of handling procedures for hazardous substances associated with the site business activities; a description of the apparent problem such as documentation of spills or releases, and the results of any sampling and analysis that has been completed to characterize these; a description of potential pathways for exposure to chemicals (such as soil, water and air); a description of any sampling and analysis performed to evaluate the extent of chemicals identified in the soil and/or groundwater; an assessment of the threat to the public health and the environment; an identification of possible remediation strategies; and conclusions and recommendations. Specific details to be included in the PEA are described in the Preliminary Endangerment Assessment Guidance Manual, Department of Toxic Substances Control, January 1994.

If hazardous materials were identified in the soil or groundwater at levels that would present a risk to the public (including construction workers) or the environment, it would be necessary to remediate the site in compliance with applicable laws and regulations prior to construction to reduce the potential for exposing construction workers and the public to hazardous substances during construction of the proposed project. Prior to implementing the remediation, a detailed plan would be developed and submitted to the regulatory agencies for review and concurrence, and to ensure compliance with applicable laws and regulations. Following remediation of the project site, a report would be submitted to the regulatory agencies documenting adequate removal of soil. A health and safety plan would be prepared for all stages of the site investigation(s) and remediation(s). The plan would specify methods to protect the public, construction workers and the environment from exposure to hazardous materials.

Impact J.3: The presence of hazardous materials would impose restrictions on the handling and disposal of any soil excavated during construction and renovation. During excavation of this soil, the public could become exposed to chemical-laden dust or could directly contact the hazardous materials if allowed access to the area. (Potentially Significant)

Hazardous materials present on site soil may impose special disposal requirements for any soil excavated during construction or renovation. Waste disposal regulations are discussed in Appendix E. Special precautions would be necessary to control the production of chemical-laden dust and to restrict public access to the excavation area.

Impact J.4: Hazardous materials remaining on site following site remediation and project construction might impose restrictions on the design of the proposed buildings for the proposed project. (Potentially Significant)

If hazardous materials were to remain in the soil or groundwater after construction, building occupants might be exposed to hazardous materials unless the New State Office Building or the California State Building are designed to prevent exposure. For example, if volatile organic compounds were identified in the soil or groundwater, the vapors could potentially enter the building, causing irritation to the occupants unless a vapor barrier were constructed.

Impact J.5: The underground storage tanks at the proposed project site are not in compliance with current regulations. The regulations require periodic monitoring of the underground storage tanks which would provide early detection of a leak from the tanks. An undetected leak may cause more environmental impairment. (Potentially Significant)

One underground storage tank in the former Redwood Street at the project site was abandoned in-place prior to 1985 without a permit from the regulatory agencies. If the tank was abandoned prior to January 1, 1984, no additional action would be required. However, the State would be responsible for any environmental liability associated with the tank. If the underground storage tank was abandoned subsequent to January 1, 1984, the San Francisco Department of Public Health would require documentation of proper closure and sampling in the vicinity of the tank to demonstrate whether there have been any environmental impacts from the tank. Previous sampling has not indicated that there is a contamination from the tank.

The underground storage tank in the basement of the California State Building is not currently in use and would need to be brought into compliance with underground storage tank regulations of Title 23 of the California Code of Regulations. This would require tank testing and preparation of a monitoring plan for the tank. The construction of the tank would also need to be brought into compliance with current requirements. Alternatively, the tank may be properly closed. This typically includes removal of the underground storage tank, with associated soil sampling. In some cases where the integrity of a building would be threatened by removal of an underground storage tank, abandonment in place may be approved. If this method were chosen, it would be necessary to conduct soil and groundwater sampling to assess whether contamination from the tank has occurred. If soil or groundwater contamination were indicated during the tank closure, it would be necessary to evaluate the extent as described above under Impact J-2.

The 10,000-gallon underground storage tank that is in use would also need to be brought into compliance with current underground storage tank regulations or properly closed.

Impact J.6: During construction of the proposed project, previously unidentified hazardous substances could be encountered at the project site. (Potentially Significant)

Previously unidentified hazardous substances could potentially be present at the site, because of specific land uses subsequent to 1906 that involved the use of hazardous materials, or from previously identified off-site sources. Based on the review of sites within 2,000 ft. of the project site, the potential for hazardous materials due to off-site sources is low. However, it is impractical to assess soil quality due to previous land uses subsequent to 1906 through soil sampling prior to construction; those potential sources would probably produce localized areas of contamination of hazardous materials that would be difficult to locate. The locations where hazardous materials may have been previously used are not documented; most of the proposed

project site is covered by the existing buildings which obscure any visual indications of contamination.

If previously unidentified hazardous substances were identified during construction of the proposed project, exposure of workers and the community to hazardous materials could occur through inhalation of vapors, fumes or contaminated dust (or possibly through dermal contact with contaminated materials or through direct or indirect ingestion) if the materials are improperly managed. The degree of any public health impact associated with the hazardous substances would depend on the nature and extent of any hazardous substances encountered. Sampling would be necessary to identify the hazardous substances present and it would be necessary to notify the regulatory agencies.

Identification of hazardous substances at the site would require preparation of a remediation plan and health and safety plan to reduce the potential for exposure of workers and the public to hazardous substances as described above for Impact J-2.

Impact J.7: If groundwater at the site were contaminated, it would be necessary to obtain a permit for discharge of the groundwater during any dewatering associated with excavation or construction. (Potentially Significant)

On the basis of previous land uses at the project site and in the vicinity, there is also the potential that groundwater at the proposed project site may be contaminated with chemicals, especially petroleum-related compounds. Disposal of groundwater to the City's combined sewer system would be regulated by the City's Industrial Waste Ordinance (Public Works Code, Article 4.1). Toxic or otherwise hazardous materials in the combined storm / sanitary sewer system could damage the treatment plant or pass through the plan incompletely treated and cause problems in the receiving waters of San Francisco. If chemicals are present in the groundwater that is produced during dewatering, a permit for the discharge would be required from the Department of Public Works. If the levels of chemicals were higher than the discharge limitations, the groundwater would need to be treated on-site prior to discharge to the combined storm / sanitary sewer system. However, the potential for the presence of chemicals in the groundwater has not been evaluated through previous sampling. This impact would not be significant. Mitigation Measure J.2 includes recommendations for groundwater sampling to evaluate groundwater quality prior to construction.

Impact J.8: Dewatering of the site during construction could increase the sediment load to the City sewer system. (Not Significant)

Groundwater produced during dewatering could contain heavy sediment loads. When discharged to the storm or sanitary sewer, the sediment could cause clogging or could cause difficulties at the treatment site.

Impact J.9: Street closures or reduction in street capacity during construction could impede local emergency response actions in the event of a fire or other type of emergency. (Not Significant)

The proposed project is located in the Civic Center area near downtown, an area which can become congested with traffic. If the streets were closed for construction, this could impede local emergency response actions. It is not expected that any street closures would be required for construction of the proposed project, but that only the sidewalk and parking lanes would be blocked. Local emergency response personnel for the police and fire departments do not feel that this would impede their response actions. The fire department would require that the connections for fire fighting water remain unblocked.

<u>Mitigation</u>

Mitigation J.1: The project would include additional surveys to identify more precisely the types and quantities of hazardous building materials present in the California State Building and the Annex. If necessary to protect public health, construction workers or the environment, removal and abatement of identified hazardous building materials would be conducted prior to demolition or renovation. Removal or abatement would be conducted in accordance with applicable regulations by a qualified contractor(s) using appropriate abatement procedures.

Prior to demolition or renovation, detailed surveys would be conducted to identify the condition and precise amounts of hazardous building materials in the California State Building and the Annex. The building surveys would identify the quantity and condition of asbestos, lead-based paint and other hazardous building materials present in the buildings. The survey contractor would recommend appropriate management procedures for the materials identified including encapsulation, removal or abatement.

Abatement, remediation, or disposal of any asbestos-containing materials or lead-based paint would be performed prior to demolition activities by certified contractors utilizing the necessary engineering controls in accordance with the applicable regulatory standards. Proper abatement

procedures would include methods to control the release of airborne materials such as containment of abatement activities and wetting of the materials being abated; air sampling to monitor the airborne concentrations of asbestos or lead; personnel safety precautions; and proper disposal of any materials removed. Regulations pertaining to the abatement of asbestos and lead-based paint as well as the disposal of these materials are included in Appendix E. The project sponsor would ensure that these regulations are adhered to during abatement and disposal activities.

Other hazardous building materials identified during the surveys, such as fluorescent lights and PCB-containing equipment, would be removed and disposed of in accordance with applicable regulations. The project sponsor would require the contractor(s) to conform to state and Federal regulations for the removal and disposal of these hazardous building materials. The San Francisco Fire Department also has regulations to protect against fire hazards during asbestos abatement (Number 88-4). The project sponsor would ensure that these regulations are followed.

In the California State Building, asbestos-containing materials that are in good (nonfriable) condition that cannot be abated immediately could be managed through implementation of an operation and maintenance program until abatement or remedial action is undertaken. This program would include notification of the presence of asbestos-containing materials to occupants of the building, formal training of maintenance personnel which will address the potential health hazards associated with asbestos and instruction on the policies and methods for working with asbestos-containing materials, regular inspections of the materials to observe for any deterioration that would necessitate corrective action, and periodic air sampling/monitoring. If asbestos-containing materials were left in the building, the building occupants would be notified of their presence in accordance with the requirements of Proposition 65 and Assembly Bill 3713. The building occupants would also be notified that the operation and maintenance program is in effect.

Significance After Mitigation: **Less-than-significant**

Mitigation J.2: The project would include a soil and groundwater quality investigation at the proposed site. If necessary to protect public health, construction workers or the environment, site remediation would be implemented. Implementation of the measures below would be necessary to evaluate soil and groundwater quality at the proposed project site and assess more accurately the potential impacts on the project of the presence of hazardous materials.

The project would include a soil and groundwater quality investigation prior to excavation and construction. At a minimum, the investigation would include the collection of soil samples and installation and sampling of a groundwater monitoring well in the western portion of the site adjacent to the waste oil leak at the San Francisco Courts Building site; the collection of soil samples from any fill materials that would be removed during excavation; collection of soil samples adjacent to the existing 10,000-gallon diesel underground storage tank from depths below the bottom of the tank; collection of soil samples from the vicinity of the underground storage tank located in the basement of the California State Building; and installation and sampling of a groundwater-monitoring well in the expected downgradient direction those two tanks. Installation of groundwater monitoring wells is recommended even if chemicals are not identified in the soil samples. This is because it is expected that groundwater at the proposed project site may be shallower than the bottom of the underground tanks. Impairment of groundwater quality could occur without impairment of shallow soil quality.

In accordance with the *Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure,* October 1989 and the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Storage Tank Sites,* August 10, 1990, soil and groundwater samples from the vicinity of the underground storage tanks would be analyzed for total petroleum hydrocarbons as diesel and benzene, toluene, ethylbenzene and xylenes at a minimum. Samples from the vicinity of the waste oil leak at the San Francisco Courts Building site would be analyzed for total petroleum hydrocarbons as gasoline, diesel, and motor oil; benzene, toluene, ethylbenzene and xylenes; polychlorinated biphenyls; solvents; semivolatile organic compounds; and metals. Samples of the earthquake fill materials would be analyzed for polynuclear aromatic hydrocarbons, metals (including lead), total petroleum hydrocarbons and volatile organic compounds as well as any hazardous materials that were used previous to 1906. The Leaking Underground Fuel Tank Field Manual is published by the State Water Resources Control Board, and the Regional Board Staff Recommendations for Preliminary Evaluation of an Investigation of Underground Storage Tank Sites is published by the San Francisco Bay Region of the California Regional Water Quality Control Board.

If hazardous materials were identified, the appropriate regulatory agencies would be notified; any additional investigations would be conducted in accordance with regulatory requirements. The project sponsor would ensure that the site is remediated, as required.

During site investigation(s) and remediation(s), implementation of legally required health and safety plans would minimize the potential exposure of workers and the public to hazardous substances. Typically, health and safety plans include identification of the chemicals present, potential health and safety hazards, monitoring to be performed during site activities, identification of appropriate personal protection equipment and emergency response procedures. Once remediated, the potential to encounter contaminated soils or groundwater during construction would be low, which would reduce the potential for future exposure of workers and the community to hazardous materials.

Significance After Mitigation: **Less-than-significant**

Mitigation J.3: Any soil containing hazardous materials produced during excavation would be disposed of in accordance with applicable laws and regulations. Measures would be implemented to control the production of dust during excavation and removal of soil containing chemicals. A fence would be constructed around the excavation to control access by the public and unauthorized personnel.

The project sponsor would ensure that the contractor(s) identify appropriate disposal procedures for any soil produced during excavation after sampling and analysis of the soil has been completed. The regulations which apply to disposal of soil are well established (see Appendix E). Hazardous wastes would require disposal at a Class I disposal facility or treatment. Wastes which contain chemicals but are not classified as hazardous could be disposed of at a Class II or III landfill, depending on the levels of chemicals present. Individual Class II and III landfills have individual acceptance criteria for waste. The project sponsor would ensure that any soil containing hazardous materials is disposed of in accordance with applicable laws and regulations.

The project would include dust control measures to minimize the potential public health impacts associated with visible dust emissions, air quality pollutants, and chemical laden dust. This would include regular watering of exposed soil and covering the stockpiles and trucks carrying spoil materials. (See also Mitigation Measure for Air Quality, p.170.)

If soil containing chemicals were excavated, the project would include, from the time ground surface is exposed until all excavation and construction activities have been completed, a fence around the area where chemicals have been identified. Site access would be restricted to

necessary personnel. Warning signs prohibiting access by the general public onto the project site should be posted at all construction access points.

During excavation and construction, the project contractor would follow a legally required health and safety plan, as described under measure J.2 above.

Significance After Mitigation: **Less-than-significant**

Mitigation J.4: The project design would take into consideration the presence of any hazardous materials that might be left at the site following construction.

Specific constraints on construction of the proposed project due to the presence of hazardous materials cannot be identified until sampling and analysis of the soil has been completed. The project design would include any measures necessary under current regulations to mitigate the presence of hazardous materials that might be allowed to remain on the property. One such measure would be to install a vapor barrier around the underground portions of the structures if volatile organic compounds are identified in the shallow groundwater or soil.

Significance After Mitigation: **Less-than-significant**

Mitigation J.5: Existing underground storage tanks would be brought into compliance with current underground storage tank regulations.

For the former Redwood Street tank that has been abandoned, records would be reviewed to identify when the underground storage tank was closed, if the records are available. If it was closed after January 1, 1984, closure documentation and the results of soil sampling in the vicinity of the tank would be submitted to the San Francisco Department of Public Health, who would review the information submitted and make a judgment regarding whether the tank was appropriately abandoned. If DPH judges that the abandonment was not done properly, removal of the tank or additional investigation could be required. The project sponsor would ensure that the work is implemented.

For the tank in the basement of the California State Building, the project sponsor would ensure that the tank is either brought into compliance with current underground storage tank regulations or properly closed. The project sponsor would also ensure that the 10,000-gallon underground storage tank at the proposed project site is brought into compliance with current tank regulations

or properly closed. The appropriate action will depend on specific construction plans for the proposed project.

Significance After Mitigation: **Less-than-significant**

Mitigation J.6: The project contractor(s) would monitor for visual indications of contamination during excavation and construction. If contamination is encountered the contractor(s) would follow appropriate procedures for the investigation and remediation of the contamination.

Contractors would be required to be alert for visible evidence of hazardous materials, such as soil discoloration, suspicious odors, or presence of underground tanks, piping or other buried building materials. The contractor would have a contingency plan for sampling and analysis of potentially hazardous substances and coordination with the regulatory agencies in the event that previously unidentified hazardous substances were encountered during construction. If hazardous substances were identified, the contractor would be required to prepare site health and safety plans, sampling and investigation plans, and if necessary, disposal/remediation plans. Any site investigations or remediations would be performed in accordance with applicable laws. The San Francisco Bay Regional Water Quality Control Board could be involved if the groundwater or surface water is contaminated and the California Department of Toxic Substances Control could become involved if soils were contaminated.

Significance After Mitigation: **Less-than-significant**

Mitigation J.7: The project would include analysis of groundwater prior to dewatering; groundwater from dewatering would be discharged in accordance with applicable regulations.

If dewatering were required, groundwater would be analyzed for chemicals prior to dewatering in accordance with the Industrial Waste Ordinance to determine if groundwater may be discharged to the combined sewer system. Disposal of the groundwater should be conducted in accordance with the Industrial Waste Ordinance (Public Works Code, Article 4.1). If the levels of chemicals identified in the groundwater were higher than the discharge limitations, then the groundwater would be treated on site prior to discharge.

Significance After Mitigation: **Less-than-significant**

Mitigation J.8: The project contractor(s) would install a holding tank prior to discharge to the sewer to allow solids to settle out of the water produced during dewatering.

During any dewatering, groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this were found necessary by the Industrial Waste Division of the San Francisco Department of Public Works, to reduce the amount of sediment entering the combined storm drain/sewer lines. The project sponsor would also ensure that sediment traps are installed and maintained in local storm water intakes during the construction period to reduce the amount of sediment entering the storm drain/sewer lines, if this were found necessary by the Industrial Waste Division of the Department of Public Works.

Significance After Mitigation: **Less-than-significant**

Mitigation J.9: No mitigation is required for Impact J.9, for street closure effects.

NOTES - Public Health and Safety

1 Allegri, Theodore H., Sr., *Handling and Management of Hazardous Materials and Waste.* Chapman and Hall, 1986.

2 Pickering Environmental Consultants, Inc., *Asbestos Survey of 350 McAllister Building, San Francisco, California.* Prepared for Esherick Homsey Dodge & Davis. December, 1989.

3 Con-Test, Inc., *Asbestos Survey of the State Office Building, 455 Golden Gate Avenue, San Francisco, California.* Prepared for Esherick Homsey Dodge & Davis. May 1993.

4 Allegri, Theodore H., Sr., *Handling and Management of Hazardous Materials and Waste.* Chapman and Hall, 1986.

5 U.S. Environmental Protection Agency, Note to Hank Habicht re Disposal of PCB-containing Fluorescent Light Ballasts. April 16, 1992.

6 California Environmental Protection Agency, Department of Toxic Substances Control, Lighting Wastes, November, 1992.

7 Pickering Environmental Consultants, Inc., *Asbestos Survey of 350 McAllister Building, San Francisco, California.* Prepared for Esherick Homsey Dodge & Davis. December, 1989.

8 Environmental Science Associates, *San Francisco Courts Building, Environmental Impact Report, certified June 23,* 1944.

9 Jaykim Engineers, Inc., *Report of Findings, Underground Storage Tank Assessments, State Building, 350 McAllister Street/455 Golden Gate Avenue, San Francisco, California.* September 25, 1992.

10 Mike Golden, Office of the State Architect, telephone conversation with Mary McDonald of Orion Environmental Associates, July 12, 1994.

11 Fred Luzzi, Regional Building Manager, Office of Buildings and Grounds, telephone conversation with Mary McDonald of Orion Environmental Associates, July 13, 1994.

12 Mike Golden, Office of the State Architect, telephone conversation with Mary McDonald of Orion Environmental Associates, July 12, 1994.

13 Petroleum products occur in a variety of forms including gasoline, diesel and oil. Total petroleum hydrocarbons as diesel is a measure of the concentration of diesel in the soil samples analyzed. Benzene, toluene, ethylbenzene and xylenes are volatile components of many petroleum products.

14 Michael Golden, Office of the State Architect, telephone conversation with Mary McDonald of Orion Environmental Associates, July 12, 1994.

15 *San Francisco Courts Building, Environmental Impact Report, certified June 23*, 1944.

16 Total petroleum hydrocarbons as motor oil is a measure of the concentration of waste oil in the soil samples analyzed.

17 San Francisco Department of Public Health, *List of Local Oversight Facilities*, May 23, 1994.

18 State of California Environmental Protection Agency, Department of Toxic Substances Control, *Preliminary Endangerment Assessment Guidance Manual*, January 1994.

K. POPULATION AND HOUSING

SETTING

San Francisco

Population

San Francisco's 1994 population is estimated to be approximately 751,700, which represents an increase of 27,700 people over the 1990 population of 724,000 (see Table 14).[1,2] San Francisco's population in 2000 is expected to be 784,400, about an 8% increase from 1990.[3] According to the Association of Bay Area Governments (ABAG), San Francisco's year 2010 population is projected to be 819,000, which represents a 4.4% increase between 2000 and 2010.[4]

TABLE 14: CITY OF SAN FRANCISCO POPULATION, 1990-2010

Year	Total Population	Net Increase Over 1980	Percent Increase Over 1980
1990	724,000/a/	45,000	6.6
1994	751,700	72,700	10.7
2000	784,400	105,400	15.5
2010	819,000	140,000	20.6

/a/ The City of San Francisco challenged this total and provided data for uncounted dwelling units, supporting a total population figure of 760,000. The 724,000 number was deemed to be without legal standing by the U.S. District Court, in Eastern District of New York City, City of New York et al., Plaintiffs vs. U.S. Department of Commerce.

SOURCE: San Francisco Department of City Planning; State Department of Finance; and Environmental Science Associates

Employment

The San Francisco Planning Department recently published the *Downtown Plan Monitoring Report,* reviewing the rate of growth and level of services provided in Downtown San Francisco.

The report also considers the effectiveness of Downtown Plan controls.[5] The 1985 *Downtown Plan* projected growth of Downtown employment from about 304,000 in 1985 to about 350,000 jobs in 1995. The report notes that Downtown employment fell to about 278,000 in 1993 and decreased by about 26,000 jobs between 1985 and 1993. The City of San Francisco as a whole had approximately 550,000 jobs in 1985, 567,000 jobs in 1990 and decreased to approximately 528,000 in 1993. Compared to 1985 employment levels, jobs in San Francisco had increased by 17,120 (3%) by 1990 and decreased by 21,880 (4%) by 1993; these increases in employment were lower than what had been previously projected for San Francisco. The national recession, reduction of the defense industry and the restructuring of other California industries are, in part, responsible for these lower than anticipated employment levels. As shown in Table 15, the services; government; financial, insurance, and real estate; and retail sectors accounted for over 77% of total jobs in San Francisco.[6]

TABLE 15: EXISTING AND PROJECTED JOBS BY INDUSTRIAL SECTOR, CITY OF SAN FRANCISCO

Industrial Sector	Percent of Total Jobs 1980	1990	2000	2010
Services	27.9%	35.4%	41.8%	46.0%
Retail	12.5%	13.0%	13.8%	13.0%
Manufacturing	9.2%	7.0%	7.4%	6.2%
Financial, Insurance and Real Estate	15.6%	13.4%	11.6%	11.2%
Construction	2.4%	2.8%	3.7%	3.3%
Wholesale Trade	6.9%	5.2%	4.8%	4.5%
Government	16.0%	16.2%	10.0%	9.3%
Transportation, Communication and Utilities	9.8%	7.0%	6.9%	6.5%
	100.0%	100.0%	100.0%	100.0%

NOTE: Totals may not add due to rounding.

SOURCE: San Francisco Department of City Planning, Office of Analysis and Information Systems, *Commerce and Industry Inventory*, July 1993.

According to ABAG, over the next 15 years, San Francisco is expected to experience substantial job gains in services; retail; and financial, insurance and real estate. Employment was projected taking into account a series of variables, including recent population growth trends, future land use development patterns, and a series of economic factors. Although ABAG's employment projections for San Francisco appear to be very optimistic, given the City's recent employment trends, it is expected that between 1990 and 2000, the total number of jobs in San Francisco would increase by approximately 4% to 595,400. By 2010, the total number of jobs in San Francisco is expected to be 667,600, representing a 12% increase over year 2000 employment levels.[7]

Housing

There are approximately 332,882 housing units in San Francisco in 1994.[8] Approximately 32% of these housing units are single-family homes, and about 68% of these homes are multi-family units.[9] The 1994 housing unit total represents an increase of approximately 3.7% from the 1990 total of 328,470 housing units, and a 1.5% increase from units in 1980.[10] Housing units in San Francisco are expected to increase to 350,100 by 2000 and to 359,400 by 2010.[11]

Households. In 1990, San Francisco had a total of 305,584 households with an average of 2.29 persons per household.[12] According to ABAG, by year 2000, it is expected that San Francisco will have 323,400 households, representing a 5.8% increase above 1990.[13] By 2010, households in San Francisco are projected to total 342,300, an increase of 5.8% over year 2000 levels.[14] By 2010, it is projected that the average household size will be similar to 1994 levels of 2.34 and a decrease from projected year 2000 level of 2.37.[15]

Jobs/Housing Balance. One measure of the jobs/housing balance in a community is a comparison of the number of jobs with the number of employed residents. It is assumed that a balance in the number of employed residents and job opportunities would help control housing costs, and reduce commuting distances, thus reducing environmental impacts; this assumes that each San Francisco resident would hold a job in the City or that each job in San Francisco would be held by a local resident. However, a 1:1 balance in a community is usually not the case, since other factors affect housing and job location choices in the region as a whole.

In 1990, there were approximately 567,000 jobs and 391,300 employed residents in San Francisco, or about a jobs/housing ratio of 1.45:1.[16] This ratio indicates a net total of

approximately 182,700 employed persons commuting to jobs in San Francisco from other Bay Area communities; some employed San Francisco residents commute to job locations outside San Francisco. Thus, actual in-commuting to San Francisco jobs was higher than 182,700 in 1990.

The *Mission Bay Plan EIR* and the *Downtown Plan EIR* also developed future housing, employment and population estimates for San Francisco. The Mission Bay EIR, in particular, developed projections for each of these variables. Under Mission Bay Alternative A, the scenario that most resembles the approved plan, projections for the year 2000 are as follows: population, 785,780; jobs, 721,590; housing units, 339,200. In comparison to ABAG's 1994 projections, the *Mission Bay Plan* estimates for population are less than 1% higher, employment estimates are about 18% higher, and housing unit projections are about 6% lower. For purposes of this EIR, the analysis will use the more current ABAG projections.

Site

The project is now occupied by the 252,000-gross-sq.-ft. California State Building at 350 McAllister Street and the 384,000-gross-sq.-ft. Annex at 455 Golden Gate Avenue. The California State Building is vacant; the Annex is currently occupied by 925 employees.[17] Prior to the Loma Prieta earthquake in 1989, the State Building and the Annex housed approximately 1,200 to 1,300 workers.

As of 1991, there were approximately 12,000 state employees working in San Francisco. Residence patterns for these employees are as follows: San Francisco, 4,532 (38%); Oakland / East Bay, 3,754 (31%); Peninsula, 1,977 (16%), North Bay, 888 (7%); and other, 849 (7%).[18]

IMPACTS AND MITIGATION

Significance Criteria

The project would have a significant impact if it would contribute substantially to a cumulative, regional jobs/housing imbalance.

Impacts

Impact K.1: The project would maintain state employment at current levels and would not directly increase employment in San Francisco. (Not Significant)

Implementation of the proposed project, which includes the renovation of the California State Building and the replacement of the Annex with the New State Office Building, would create a total of 1,053,000 gross sq. ft. and a net increase of approximately 460,000 gross sq. ft. of office space at the project site. At full occupancy, the project would house approximately 2,500 employees; about 925 of these jobs are at the project site now. Of the approximately 2,500 state employees accommodated by the project, about 1,575 would be relocated to the proposed project site from other locations in San Francisco. There would not be a direct increase in employment in San Francisco due to the project.

Impact K.2: The project would not directly increase the number of San Francisco residents. (Not Significant)

At full occupancy, the project would accommodate approximately 2,500 state employees. As discussed above, about 1,575 state employees or jobs now located elsewhere in San Francisco would be located at the project site. These employees already reside in San Francisco or other Bay Area locations. Relocation of office space for these employees to the Civic Center would not be expected to cause existing state employees to change their place of residence. Thus, the project would not have a direct impact on population.

Impact K.3: The project would maintain state employment at current levels and would not directly increase housing demand in San Francisco. (Not Significant)

The project would accommodate approximately 2,500 employees. As noted above, these employees currently live in San Francisco or throughout the Bay Area. The project would relocate about 1,575 state workers from different locations in San Francisco to the Civic Center. Relocation of office space for these employees to the Civic Center would not be expected to cause existing state employees to change their place of residence. Therefore, the project would not have a direct impact on housing.

By 2003, approximately 2,900 employees could be accommodated at the site through flex-time, telecommuting, job-sharing or "hoteling" field staff using desk or office space on an as-needed,

part-time basis. However, for purposes of this analysis, it has been assumed that the number of employees located at the site at any one time would number no more than 2,500.

Impact K.4: The project could, indirectly, increase employment in San Francisco by approximately 1,575 employees. (Not Significant)

At full occupancy, the proposed project could house approximately 2,500 state employees. As noted above, of these 2,500 employees, approximately 1,575 of them would be relocated to the Civic Center from the various locations currently occupied by state office workers in San Francisco. It is assumed that the leased office space vacated by these employees would then be occupied over time by other businesses and employees. As noted above, backfill of office space vacated by the State would generate new employment in San Francisco. The released space could be occupied by existing firms expanding in San Francisco, or firms new to San Francisco. That increase in San Francisco employment would not have a substantial impact on San Francisco's employment, given that current employment levels for the area are below previously projected estimates. Employment levels projected for the Downtown were at 375,900 in 1990, and 396,400 in 1993.[19] Actual employment levels for the area were approximately 290,900 in 1990 and 276,800 in 1993.[20] With lower employment levels than projected, employment generated from the project backfill would be a larger percentage of the jobs found in the area, but within the projected employment levels for the area. The indirect employment of approximately 1,575 jobs that could be accommodated by the release of the office space that is now occupied by state employees would be approximately 4% of the conservative estimate of 42,000 new Downtown jobs between 1990 and 2015, estimated in the *Downtown Plan Monitoring Report.*

Impact K.5: The project could, indirectly, increase the number of San Francisco residents. (Not Significant)

As noted above, the project could indirectly create new employment in San Francisco of about 1,575 jobs. Assuming that these workers would have residence patterns similar to other office employees in San Francisco, approximately half would live in San Francisco.[21] The project could indirectly increase population in San Francisco by approximately 840. The potential addition of approximately 840 new San Francisco residents would be approximately 0.1% of the 784,400 total residents projected for San Francisco in the year 2000. This increase would not be a substantial impact.

Impact K.6: The project could, indirectly, increase San Francisco's population and demand for housing. (Not Significant)

Assuming that the proposed project could, indirectly, increase San Francisco's population by 840 new residents (as noted above), the project could create additional demand for housing. Using the 1990 employed residents per household ratio of 1.28, the project could, indirectly, create a demand for approximately 650 housing units. This would represent approximately 0.20% percent of the 350,100 total housing units projected for San Francisco in the year 2000. The projected indirect demand for housing would not have a substantial impact on San Francisco's jobs/housing balance.

The *Mission Bay Plan EIR* and *South of Market Plan EIR*, reviewing proposed plans for those areas of San Francisco, discuss residence patterns in a City-wide and regional context in relation to housing demand from employment growth in the Downtown & Vicinity. San Francisco employment growth, including employment generated indirectly by the project, will contribute to housing demand throughout the region, as not all San Francisco workers will live in the City. If housing is built as proposed in areas of San Francisco such as Mission Bay, more City workers could live in the City, in which case San Francisco would contribute less to housing demand in the rest of the region.

Regardless of the type of development in areas of San Francisco such as Mission Bay and in South of Market, the importance of San Francisco employment as a factor affecting regional housing demand will decline over time because more housing will be added in the City relative to job growth, compared to the situation in the past. As housing and the labor force continue to grow more rapidly outside San Francisco, people working in San Francisco will represent the same or a smaller percentage of the employed people living elsewhere in the region. San Francisco workers will require about the same share of the region's housing in the future as they did in the early 1980's. San Francisco's effects on the regional housing market will vary in the future. City workers could become more important to the housing market in some close-in communities with reasonable transportation access to the workplace: the western parts of the East Bay and east of the hills along BART corridors, northern San Mateo County and parts of Marin County. Nevertheless, the price of housing in San Francisco is expected to remain high relative to other areas in the region. This, combined with continued demand for lower cost housing, would continue to create upward pressure on costs/rents of existing units.

According to the cited EIRs, about half of the people working in the Downtown & Vicinity would live in the City in 2000 and 2020. The rest would live in communities throughout the rest of the region: about 30% in the East Bay, 13% in the Peninsula and in the South Bay and about 8% in the North Bay. Downtown & Vicinity workers living in the City would represent about 55% of the City's employed residents in 2000 and 57% in 2020. People working downtown would represent a considerably small portion (about 4-9%) of the employed residents of other Bay Area communities.[22]

<u>Mitigation</u>

No significant adverse effects for Population and Housing were identified. Therefore, no mitigation measures are proposed.

NOTES - Population and Housing

1 State Department of Finance, *California Population and Housing Estimates*, January 1994.

2 City of San Francisco Department of City Planning, Office of Analysis and Information Systems, *San Francisco Atlas, 1991.*

3 City of San Francisco Department of City Planning, Office of Analysis and Information Systems, *San Francisco Atlas, 1991.*

4 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

5 City of San Francisco, Department of City Planning, *Downtown Plan Monitoring Report, 1994.*

6 City of San Francisco, Department of City Planning, Office of Analysis and Information Systems, *Commerce and Industry Inventory*, July 1993.

7 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

8 State Department of Finance, *California Population and Housing Estimates*, January 1994.

9 State Department of Finance, *California Population and Housing Estimates*, January 1994.

10 City of San Francisco Department of City Planning, Office of Analysis and Information Systems, *San Francisco Atlas, 1991.*

11 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

12 City of San Francisco Department of City Planning, *Guidelines for Environmental Review: Transportation Impacts,* July 1991.

13 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

14 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

15 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

16 Association of Bay Area Governments (ABAG), *Projections 94*, July 1994.

17 State Department of General Services, Christal Waters, telephone conversation, July 8, 1994.

18 City of San Francisco Department of City Planning, *Guidelines for Environmental Review: Transportation Impacts,* July 1991.

19 City of San Francisco, *Mission Bay EIR,*Volume II, pp. VI.3.54,1990.

20 City of San Francisco, Department of City Planning, *Downtown Plan Monitoring Report, 1994.*

21 City of San Francisco Department of City Planning, *Guidelines for Environmental Review: Transportation Impacts,* July 1991.

22 City of San Francisco, *Mission Bay EIR,* Volume II, 1990.

L. CUMULATIVE IMPACTS

CEQA Guidelines Section 15130 requires discussion of significant cumulative effects. Cumulative effects are those which may occur from two or more individual effects which when considered together are considerable or increase environmental effects. Guidelines direct that cumulative effects reflect either a list of past, present and reasonably anticipated future projects, or a summary of projections in adopted general plans or related planning documents that evaluate regional or area-wide conditions.

In this EIR on the proposed State of California Civic Center Complex, cumulative effects are addressed as appropriate within each environmental topic in Chapter III. As noted in the Introduction, this EIR incorporates by reference area-wide analyses in the previous (*Mission Bay, Downtown Plan and South of Market Plan*) EIRs. Cumulative analyses of transportation, air quality, and population and housing are based on those documents. More local cumulative effects on land use and noise are based on known projects in the vicinity. On the basis of those analyses, the following is a summary of major cumulative effects related to the proposed project.

LAND USE

The project would reflect State of California and City of San Francisco goals for maintaining and enhancing public land uses on the site and in the Civic Center area. Cumulative land use efforts would not be significant.

TRAFFIC, TRANSIT, PARKING AND CIRCULATION

The cumulative impacts for transportation are analyzed in two time frames: short-term and long-term. Short-term cumulative impacts are related to the construction activities planned in and around the Civic Center. In addition to the proposed project, several other projects are planned or under construction of the San Francisco Courts Building, the New Main Library and the seismic renovation of other public buildings during the same general time frame as the proposed project. Long-term cumulative impacts are related to the projected traffic conditions for the area in the year 2000, on the basis of analysis in the Mission Bay and South of Market Plan EIRs. It is growth in the City and region that would result in the greatest impact on most of the transportation systems studied. In summary, both EIRs show that by 2000, congested highway conditions would result in a shift from autos to higher use of transit and ridesharing by travelers from the Downtown & Vicinity, which includes the project site. The East Bay would be the

most congested corridor, the Peninsula would be the least. By 2020, travel demand would exceed the capacity of regional transportation systems. To serve regional growth, expanded transit and freeway systems would be required.

Cumulative development in the Downtown & Vicinity in San Francisco (which includes the project site) would have a significant effect on the environment in that it would contribute to cumulative traffic increases as well as cumulative passenger loadings on MUNI, BART and other regional transit carriers. The proposed project would contribute to these cumulative effects.

Considered together with other planned, under construction, or reasonably foreseeable projects in the Civic Center area, the project would not have a significant effect on local intersection conditions, or on pedestrian crosswalk condition.

AIR QUALITY

The proposed project traffic, together with future traffic from cumulative projected growth, would not cause exceedances of CO standards at study area intersections. The project would contribute to regional cumulative transportation impacts that could cause violations of fine particulate matter (PM_{10}) standards in San Francisco, a significant cumulative effect.

NOISE

Cumulative construction noise increases could occur in the project vicinity if construction of other planned/approved projects occurs simultaneously raising noise level in the vicinity of the project to above the 80 dBA criterion. If some of the noisier phases of construction were to occur simultaneously for the Courts Building and the state project, there would be cumulative construction-related noise increases. It appears that the excavation phase of the Courts Building would not overlap with this phase of the proposed project. Construction-related noise would be generated on both sites during 1995. Surrounding buildings would be located adjacent to only one of the two sites and exposure to both sites would be limited by distance or intervening buildings. Other planned seismic renovation projects in the Civic Center would not cumulatively affect construction noise effects of the proposed project.

POPULATION AND HOUSING

The project would house approximately 2,500 state employees; about 925 of the jobs are at the project site now and about 1,575 state employees would be relocated to the proposed project site from other leased offices in San Francisco. The indirect employment of approximately 1,575 jobs that could be accommodated by the release of the office space elsewhere in San Francisco that is now occupied by state employees would be approximately four percent of the 42,000 jobs conservatively estimated to be added to Downtown San Francisco between 1990 and 2015. The project would create new net office space in San Francisco. The project would not generate new state employment in San Francisco. The released office space could be occupied by existing businesses in San Francisco moving or expanding to that space, or businesses new to San Francisco. The project could also indirectly increase population in San Francisco, by approximately 840 or approximately 0.1% of the 784,400 total residents projected for San Francisco in the year 2000. The project could also, indirectly, create a demand for approximately 650 housing units, approximately 0.2% of the 350,100 total housing units projected for San Francisco in the year 2000. These would not be significant cumulative effects.

IV. ALTERNATIVES ANALYSIS

A. ALTERNATIVE 1: NO-PROJECT

DESCRIPTION OF ALTERNATIVE

This alternative would entail no change to the site. No demolition of the Annex would occur, and the California State Building would not be renovated. The Supreme Court and Appellate Courts, and other state agencies, would remain in leased space in San Francisco. This alternative would not preclude future redevelopment of all or part of the site including renovation of the State Building. For the foreseeable future, state agencies would continue to lease space elsewhere in San Francisco.

IMPACTS

If the project were not built, and office space continued to be leased, the impacts specifically associated with the proposed project would not occur. The environmental characteristics of this alternative would be generally as described in the Setting sections of this report (see Chapter III, Environmental Setting, Impacts and Mitigation, for a discussion of existing conditions). Operational inefficiency in state agencies and services would continue from use of separate, rather than consolidated, facilities. The No-Project alternative would not meet legislative goals of developing such consolidated facilities to maintain a strong state presence in the Civic Center; would not meet legislative goals to maintain a strong presence of state offices in San Francisco; would not consolidate state office space in the Civic Center; would not maximize the number of offices housed in state-owned buildings; would not ensure long-term savings that accrue with state ownership; would not reuse the California State Building in a manner consistent with its historic functions; would not ensure full value of the State's real estate assets; and would not develop a project with a structural system capable of supporting a long life-span and quick re-occupancy after a major earthquake. Continuing leasing could meet the legislative goals to maintain the location of local-serving state offices in downtown or neighborhood areas.

This alternative would not respond to City of San Francisco policies to enhance governmental activities in the Civic Center, and maintain architectural resources. The reduced level of state employment in the Civic Center since the 1989 earthquake would continue, or possibly decline.

Existing buildings would not be replaced or upgraded with seismically safer structures. In particular, the historic California State Building, damaged in the 1989 earthquake, could be subject to further damage in a future earthquake. There would be no direct effects on visual quality or architectural resources, including historic districts, as no demolition or construction would occur. This alternative would not renovate the California State Building, a contributory building in the National Register Historic Landmark District and Historic District, and the proposed local Civic Center Historic District. The California State Building would continue in its vacant condition, with deteriorated exterior detail, and with no renovation and re-use of important interior spaces, such as the Supreme Court Room or the Governor's Suite, the original uses of the building. Traffic and parking would not be affected; future traffic conditions in the Civic Center area would reflect the impacts of cumulative development, minus the project. Transportation and potential air quality, benefits of consolidating state employment in an area well-served by transit, would not occur.

With the No-Project alternative, transportation systems would not be affected by construction traffic. No new shadow would be cast by the project; pedestrian-level wind condition would not be affected. Existing potential hazards such as asbestos in buildings on the site would remain or be remediated separately from the project. Project excavation would not occur. There would be no demolition- or construction-related worker exposure to, or disposal of, hazardous materials, or potential exposure for other persons, nor would there be any remediation of contaminated soil or groundwater (if applicable). Other impacts discussed, including air quality effects, potential effects on subsurface cultural resources, or effects related to soils and geology and hydrology, including dewatering, would not occur.

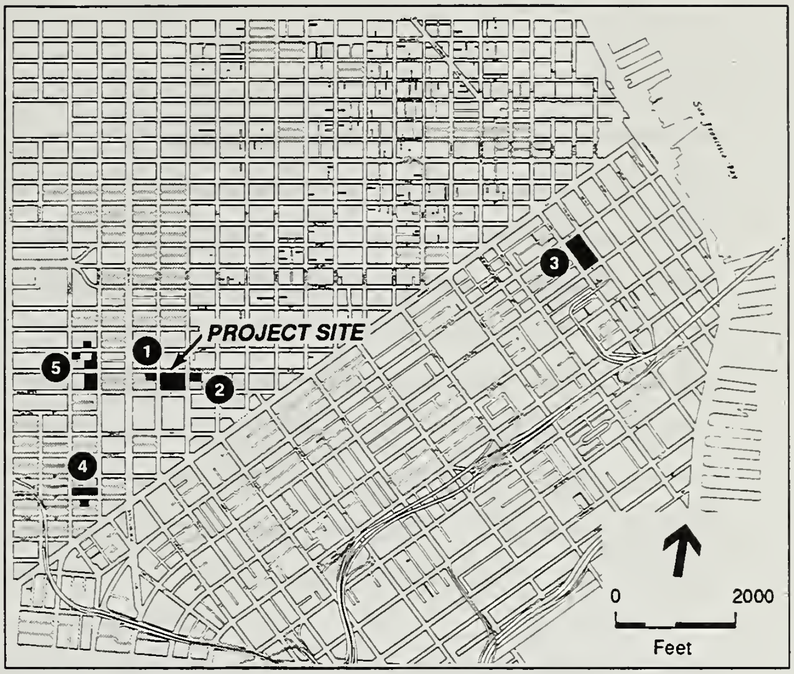
B. ALTERNATIVE 2: RENOVATE AND REUSE 525 GOLDEN GATE AVENUE WITH SMALLER NEW STATE OFFICE BUILDING

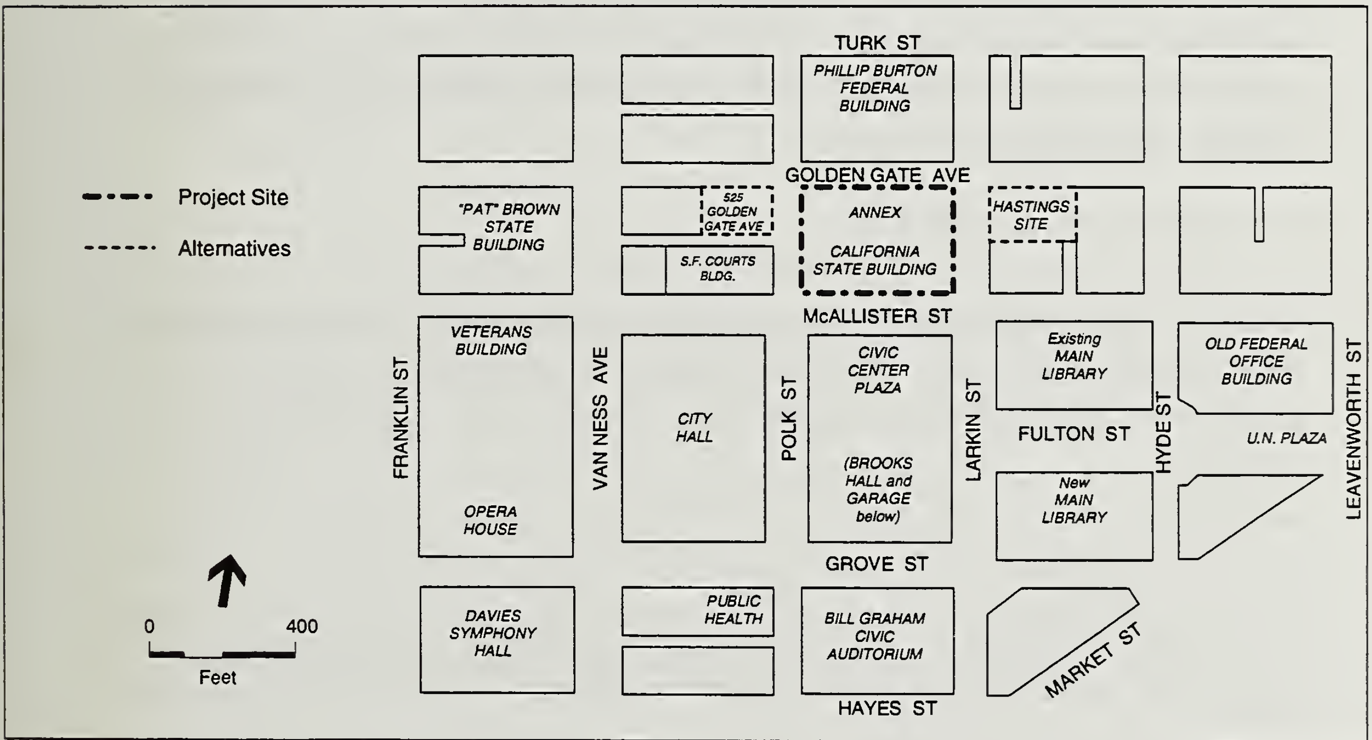
ASSUMPTIONS

The Department of General Services controls property at 525 Golden Gate Avenue, a state office building that has been vacant since the Loma Prieta earthquake, adjacent to the project site on the west (see Figure 39). The Department eventually plans to dispose of the building. Renovation and re-use of 525 Golden Gate was considered and rejected during planning for the project because use of the three existing buildings (the California State Building, the Annex and 525 Golden Gate) would supply 820,000 gross sq. ft. This would not meet the space

ALTERNATIVES

1. 525 Golden Gate Avenue
2. Hastings Site
3. Transbay Transit Terminal
4. 150 Oak Street
5. Central Freeway Sites





SOURCE: Environmental Science Associates

Figure 39
Alternatives Considered

demand of approximately 1,050,000 gross sq. ft. Alternative 2, therefore, is assumed to be a project which would include renovation of the California State Building, renovation and re-use of 525 Golden Gate Avenue, and a smaller New State Office Building (at the Annex site), totaling 1,053,000 gross sq. ft. This would meet the project objectives for space needs, and legislative goals to maintain a strong presence of state offices in San Francisco; consolidate state office space in the Civic Center; maximize the number of offices housed in state-owned buildings; ensure long-term savings that accrue with state ownership; reuse the California State Building in a manner consistent with its historic function; and develop a project with a structural system capable of supporting a long life-span and quick re-occupancy after a major earthquake. Continuing leasing could meet the legislative goal to maintain the location of local-serving state offices in downtown or neighborhood areas.

Because Alternative 2 would require construction and operations at two sites, rather than one site, development and operation and maintenance (O&M) cost would be higher, and the state found this alternative to be less economical and less efficient than construction on a single site. Over a 25-year bond payback period, the project would have a construction cost of $200,000,000 and total principal, interest, and O&M costs of about $748,000,000. Alternative 2 would have a construction cost of $201,000,000 and a payback of about $770,000,000, with the difference primarily reflecting higher O&M costs.[1]

DESCRIPTION OF ALTERNATIVE

Alternative 2 would include renovation of the California State Building, and demolition of the Annex and construction of a New State Office Building, as with the project. Renovation of 525 Golden Gate would provide the equivalent of about 150,000 gross sq. ft., and about 120,000 usable sq. ft. (Table 16 outlines this alternative).[2] Therefore, Alternative 2 would include a New State Office Building of about 695,000 gross sq. ft., compared to 845,000 gross sq. ft., with the proposed project. The New State Office Building with this alternative would be up to 13 stories and 180 ft. tall compared to up to 16 stories and 209 ft. tall with the project. This alternative would thus reduce the height of the proposed New State Office Building by three stories.

The 525 Golden Gate Avenue building is seven-stories plus basement, built in the early 1960s, immediately west across Polk Street from the project site. The alternative assumes renovation of

TABLE 16: CHARACTERISTICS OF MAJOR ALTERNATIVES

	Project	Alternative 2	Alternative 3
Gross Floor Area			
California State Building	208,000 gsf	208,000 gsf	208,000 gsf
New State Office Building	845,000	695,000	495,000
525 Golden Gate	--	150,000	150,000
Hastings Site	--	--	200,000
TOTAL/a/	1,053,000 gsf	1,053,000 gsf	1,053,000 gsf
New Construction			
Height / Floor			
New State Office Building	209/16	180/13	130/9
Hastings Site	--	--	80 ft. / 6 stories

/a/ Rounded.

SOURCE: Environmental Science Associates

525 Golden Gate would meet current structural and life-safety standards, and would provide general offices. Special facilities proposed with the project, such as the auditorium, training center and cafeteria would be part of the New State Office Building, as with the project, and the California State Building would be renovated for Supreme Court and Appellate Court uses, as with the project.

IMPACTS

The major difference between effects of the proposed project and this alternative would be related to use of two sites, and development of a smaller New State Office Building. Effects on land use, with this alternative, in the Civic Center would be similar to those of the project; the alternative would continue public use on the California State Building and Annex site, and on the 525 Golden Gate site. The proposed design for this alternative is assumed to be similar to the project, a series of elements rising in height from the California State Building to Golden Gate Avenue. The height reduction would remove three, approximately 50,000 gross sq. ft. floors,

from among floors 8 to 14 of the proposed 16-story design. The 13-story New State Office Building with this alternative would be visible from many locations around the Civic Center, but would be less prominent than the 16-story proposed project. As with the project, the New State Office Building would be seen above and to the north of the California State Building. Because of the reduced height of the New State Office Building with this alternative, a greater portion of the existing Phillip Burton Federal Building north of Golden Gate Avenue would remain visible in views in the Civic Center from the south, southwest, or southeast. Along Golden Gate Avenue, the alternative would rise to 13 stories, compared to the 20-story Federal Building across the street. The alternative New State Office Building would appear substantially larger than the existing seven-story Annex on the project site, as would the project. Shadow effects of this alternative would be reduced, compared to those of the project. Maximum shadow length with the 180-ft. alternative would be about 80 percent of project shadows. For example, in noon periods in March and September, the alternative would newly shade about 60 percent of the Federal Building plaza, compared to about 75 percent with the proposed project. Overall, the plaza would be about 75 percent in shade at noon. In summer months around noon, the Federal Building plaza would be in sun, and in winter months, largely in shade, as with the project.

Wind-tunnel testing for the project to identify Pedestrian Comfort Criterion and Hazard Criterion conditions included this alternative scenario and alternative-plus-potential development scenarios. (Wind measurement data for Alternative 2 is included in Appendix B, Tables B-2 and B-4, pp. A-37 and A-39.)

Wind effects of Alternative 2 would be similar or improved, compared to those of the proposed project. With this alternative, 16 of 38 test locations would meet the 11 mph pedestrian comfort criterion, compared to 12 points with the project, and 11 points with existing conditions. Of four points that would newly exceed the 11 mph criterion with the project, three would also exceed the criterion with the alternative. The fourth point, on Polk Street near Redwood Street, would be below 11 mph with the alternative. This would also occur with the alternative-plus potential development scenario.

Overall, the alternative would reduce wind speeds at 24 points (compared to 20 points with the project), would increase speeds at eight locations, and would not change speeds at six locations. As with the project, Alternative 2 (and Alternative 2 plus potential development) would have three locations at which the 26-mph hazard criterion would be exceeded, compared to six locations with existing locations. The three remaining exceedence locations would be the same Federal Building block exceedance points as found in the project scenario.

Effects on the architectural character from renovation of the California State Building would be similar to those with the project, including exterior renovation, seismic structural work, and potentially significant alterations of interior spaces.

Reuse of 525 Golden Gate Avenue would preclude its eventual disposal and re-use of the site for public or other facilities.

Transportation effects would also be similar to those with the project; cumulative effects would be slightly reduced, as re-use of 525 Golden Gate Avenue would not take place in addition to activity generated by the full project. Effects on intersections, transit and crosswalks in the vicinity would not be perceptibly different with use of the adjacent site. Air quality, geology and soils, and public health and safety issues would also have similar effects and mitigation measures with this alternative; no excavation would be required at 525 Golden Gate. Renovation at 525 Golden Gate could have construction noise effects at the 512 Van Ness Avenue apartments, about 100 ft. to its west. Those noise effects would be mitigated similarly to those of the project.

C. ALTERNATIVE 3: RENOVATE AND REUSE 525 GOLDEN GATE AVENUE, NEW CONSTRUCTION AT HASTINGS SITE, AND SMALLER NEW STATE OFFICE BUILDING

ASSUMPTIONS

Hastings College of Law (Hastings), a unit of the University of California, owns an approximately 38,000-sq.-ft. site at the southeast corner of Larkin Street and Golden Gate Avenue. The property includes a surface parking lot, and the site of two retail buildings and two residential hotel buildings that contained a total of 85 units with ground-floor retail space. The four buildings were demolished following the Loma Prieta earthquake. Hastings had proposed development of the San Francisco Courts Building on the Larkin/Golden Gate property. However, the City proceeded with the courts site on the northwest corner of Polk and McAllister. At the present time, Hastings is not pursuing any development planning or proposals for the site, nor is the site on the market for disposal.[3] However, the San Francisco Unified School District is considering acquisition of the Hastings site for a new elementary school. This alternative assumes the site would be available for acquisition for the project.

Alternative 3, therefore, is assumed to be a project which would include renovation of the California State Building, re-use of 525 Golden Gate Avenue, new construction at the Hastings site, and a smaller New State Office Building (at the Annex site), totaling about 1,050,000 gross

sq. ft. (see Table 16). This would meet the project objectives for space needs, and legislative goals to maintain a strong presence of state offices in San Francisco; consolidate state office space in the Civic Center; maximize the number of offices housed in state-owned buildings; ensure long-term savings that accrue with state ownership; reuse the California State Building in a manner consistent with its historic function; and develop a project with a structural system capable of supporting a long life-span and quick re-occupancy after a major earthquake. It would use, but not maximize the State's existing real estate assets.

Because Alternative 3 would require acquisition of the Hastings site, and construction and operation at three sites, rather than one site, development and operation and maintenance (O&M) costs would be higher, and the State found this alternative to be less economical and less efficient than construction on a single site. Over a 25-year bond payback period, the project would have a construction cost of $200,000,000 and a total principal, interest, and O&M costs of about $748,000,000. Alternative 3 would have a construction cost of $214,000,000 and a payback of about $844,000,000, with the difference primarily reflecting higher O&M costs.[4]

DESCRIPTION OF ALTERNATIVE

Alternative 3 would include renovation of the California State Building, demolition of the Annex and construction of a New State Office Building, as with the project. Renovation of 525 Golden Gate would provide about 150,000 gross sq. ft., and about 120,000 usable sq. ft. (Table 16 outlines this alternative). New construction at the Hastings site would provide about 200,000 gross sq. ft. Therefore, Alternative 3 would include a New State Office Building of about 495,000 gross sq. ft., compared to 845,000 gross sq. ft. with the proposed project. The new building at the Annex site with this alternative would be about nine stories and 130 ft. tall, compared to 16 stories and 209 ft. tall with the project. This alternative would thus reduce the height of the proposed New State Office Building by about seven stories. With nine floors the proposed design for this alternative New State Office Building is assumed to be a relatively low-scale building; it would not have a series of elements rising to 16 floors, as with the project.

The seven-story 525 Golden Gate Avenue building would be renovated to current standards, as with Alternative 2. Special facilities proposed with the project, such as the auditorium, training center and cafeteria, would be part of the New State Office Building, as with the project. The California State Building would be renovated for Supreme Court and Appellate Court uses, as with the project.

The new 200,000-gross-sq.-ft. building on the Hastings site would be six stories and 80 ft. tall, generally build to the property line on street frontages. The building could be set back from the rear property line to avoid blocking light from reaching the rear of existing apartment buildings on the McAllister Street frontage of the block.

The Hastings site is in an RC-4 (Residential Commercial Combined, High Density) Use District and an 80-T Height and Bulk District. It is within the North of Market Residential Special Use District. The state building would be a permitted use in the RC-4 District and the North of Market Residential Special Use District, if the project were under formal City jurisdiction.

IMPACTS

The major difference between effects of the proposed project and this alternative would be related to use of three sites, and development of a smaller New State Office Building. Effects on land use, with this alternative, in the Civic Center would be similar to those of the project; the alternative would continue public use on the California State Building and Annex site, and on the 525 Golden Gate site. It would convert the Hastings site to public uses. The nine-story New State Office Building with this alternative would be visible from many locations around the Civic Center, but would be less prominent than the 16-story proposed project

The nine-story New State Office Building with this alternative would be about 40 ft. higher than the six-story California State Building. The new building would be visible above and to the north of the California State Building; from the south in the Civic Center depending upon location of the viewer, up to 10 stories of the Federal Building would be visible to the north of the new building. The alternative would also be visible in views from Golden Gate Avenue, about half the height of the 20-story Federal Building across the street.

The new building at the Hastings site with this alternative would replace views of the existing parking uses and vacant lots, as seen from Larkin Street and Golden Gate Avenue, and from the easterly area of Civic Center Plaza. (See Figure 25, p. 58).

.) At 80 ft., this building would be similar in height to many older buildings in the Civic Center; it would be taller than the existing one- to six-story retail-residential buildings nearby on Larkin Street, McAllister Street and Golden Gate Avenue. It would be similar in height to the Hastings College of the Law classroom building which occupies the easterly third of the block. The new

building would limit views of the Larkin Street frontage of the New State Office Building, as seen from the east on Golden Gate Avenue.

Shadow effects of this alternative would be reduced, compared to those with the project. Maximum shadow length with the 130-ft. alternative New State Office Building would be about 60 percent of project shadows. For example, in noon periods in March and September, the alternative would newly shade about 15 percent of the Federal Building plaza. With existing shade, about 30 percent of the plaza would be in shade at that time, compared to about 90 percent with the project and existing shade. In summer months around noon, the Federal Building plaza would be in sun, and in winter months, largely in shade, as with the project.

The new 80-ft.-high building at the Hastings site with this alternative would add shade to streets and sidewalks, primarily Larkin Street and Golden Gate Avenue, at all times of the year. In mid-mornings in winter, new shadow from this building would reach the easterly 10 percent of the Federal Building plaza, now in sun at 10 a.m. in December. Most of the rest of the plaza is already in shade at that time.

Alternative 3 was not specifically tested in wind-tunnel studies for the project. On the basis of wind-tunnel testing data for the proposed project and for Alternative 2, it would be expected that Alternative 3 would have similar wind conditions. Alternative 3 would be expected to have the same or fewer exceedences of the hazardous wind criterion than the six that occur with existing conditions.

Effects on the architectural character from renovation the California State Building would be similar to those with the project, including exterior renovation, seismic structural work, and alterations of interior spaces.

Transportation effects would also be similar to those with the project; cumulative effects would be slightly reduced, as re-use of 525 Golden Gate Avenue and the Hastings site would not take place in addition to activity generated by the full project. Effects on intersections, transit and crosswalks in the vicinity would not be perceptibly different with use of the adjacent site. This alternative, including excavation and development at the Hastings site, would have similar effects as the project, air quality, geology and soils, and public health and safety issues. No excavation would be required at 525 Golden Gate. Renovation at 525 Golden Gate could have construction noise effects at the 512 Van Ness Avenue apartments, about 100 ft. to the west. Construction at the Hastings site would have noise effects on adjacent residential uses on the

north side of Golden Gate Avenue, the east side of Larkin Street, and the north side of McAllister Street. Those noise effects would be mitigated similarly to those of the project.

D. ALTERNATIVE 4: BASE-ISOLATION STRUCTURAL SYSTEM FOR THE CALIFORNIA STATE BUILDING

ASSUMPTIONS

The proposed project would use a fixed-base, shear-wall system to retrofit the California State Building to meet seismic response requirements that are one of the project objectives. As described in Chapter III, Section III.E, Cultural Resources, p.103, Impact E.1, the proposed shear-wall structural system was found to be an adverse effect on certain historic interior architectural features of the California State Building. This Alternative 4 would be a project that would use a base-isolation structural system for California State Building, to meet the State's objective for seismic response for the renovated building. The base-isolation system would have different effects on the interior architectural features of California State Building, as described below. Alternative 4, therefore, is assumed to be a project which would include renovation of the California State Building, and development of a New State Office Building (at the former site), totaling about 1,050,000 gross sq. ft., as with the project. This would meet the project objectives to maintain a strong presence of state offices in San Francisco; consolidate state office space in the Civic Center; maximize the number of offices housed in state-owned buildings; ensure long-term savings that accrue with state ownership; reuse the California State Building in a manner consistent with its historic function; and develop a project with a structural system capable of supporting a long life-span and quick re-occupancy after a major earthquake.

Base-isolation would be more costly than the fixed-base, shear-wall system proposed and would add about $6,000,000 in costs, for a total of about $206,000.00 in construction costs, compared to about $200,000,000 for the proposed project.[5] Operations and maintenance cost (O&M) would be similar to those for the proposed project.

DESCRIPTION OF ALTERNATIVE

Alternative 4 would include renovation of the California State Building, demolition of the Annex and construction of a New State Office Building, as with the project. The base-isolation system would include the following major features:

- Foundation work would include extensive underpinning of perimeter foundations, removal of some existing footings, jacking of all columns and perimeter walls, and the construction of two new basement floors, one above and one below the isolators. New basement shear-walls would be required to minimize uplift on the isolators.
- A 24-inch moat would be constructed along the south, west and east perimeters. A 30-inch separation would be constructed along the north wall of the New State Office Building. This joint could extend to 60 inches during a seismic event.

- The required seismic gap between the two buildings would result in a loss of available gross area per floor; the loss would be greater for the isolated approach. The net difference would be approximately 500 gross sq. ft. per floor.

- At each connecting corridor between the California State Building and the New State Office Building, special enclosures would be required to bridge the seismic gap with weather-tight, fire-safe materials. Allowing for possible seismic movement between the buildings, a vestibule about 8 ft. deep by 24 ft. wide would be required at each point of connection. This would result in an additional 180 net square feet per connection per floor to be replanned.

All other aspects of the proposed design and program would be the same with this alternative or with the project. The flexible connection at hallways between the California State Building and the New State Office Building would require re-planning abut 4,000 sq. ft. of floor area for the project. This would be expected to be accommodated in the 1,050,000 gross sq. ft. project.

IMPACTS

The major difference between the effects of the proposed project and this alternative would be related to architectural resources. Effects on land use, overall visual quality, transportation, noise, air quality, geology and soils, public health and safety and employment and population would be the same as those of the project.

With respect to architectural resources, the base-isolation alternative would still result in shear-wall construction in the California State Building. In the base-isolation scheme, however, new shear-walls would not be added on the interior of the McAllister, Larkin and Polk facades of the California State Building, as would be proposed with the project. This alternative would thus not require a four-ft. corridor adjacent to those facades, for access during construction of the shear-wall. This alternative would not affect existing original plaster surfaces, plaster molding, wood trim, paneling and cabinet work along that perimeter and intersecting partition walls. With shear-wall construction proposed as part of the project, existing wall profiles in certain Significant or Very Significant spaces, including the Governor's Suite and Chief Justice's Suite, might be altered; this could require trimming of dimensions of re-installed material, and

replacement of wall and ceiling surfaces with new material or reproduced decorative elements, such as cast plaster molding. As with the project, the base-isolation system would require shear-walls on the north walls of the three wings, the east and west walls of the central wing, and lateral shear-walls near the east and west ends of the building.

The base-isolation alternative would have greater impacts on existing elements in the California State Building basement than would the proposed project, due to the need to excavate for underpinning and installation of isolators, and basement shear-walls. This construction could alter or remove the original stairs and terrazzo floors in the basement, considered Very Significant (stairs) and Significant (flooring) components.

Alternative 4 would alter fewer Very Significant or Significant interior spaces above the basement than would the proposed project, and would avoid adverse effects of the proposed project on certain Very Significant and Significant office spaces, noted in Impact E.1, p.103. In particular, it would reduce adverse effects on interior spaces on the McAllister Street frontage of the California State Building, the Governor's Suite, the Chief Justice's Suite, and the other Justices' Suites that would result from shear wall construction adjacent to the McAllister Street facade.

The 24-inch-wide moat would be a new visual element on the exterior of the building. The moat would require removal of some existing landscaping and affect placement of the required handicapped-access ramp on the McAllister frontage, in a manner that could affect the historic exterior of the California State Building. The moat, surfaced with flexible covers, would be visible at ground levels as part of the California State Building setbacks from sidewalks on McAllister, Larkin and Polk Streets. Exterior renovation and visual quality of the California State Building as seen from the south, east and west from nearby streets and Civic Center Plaza would be the same with this alternative as with the proposed project.

CONSIDERATION OF ALTERNATIVE

As part of the Design-Build proposal, HSH considered a number of structural concepts for the renovated California State Building and the New State Office Building. Among eight structural approaches briefly presented in the HSH Design Proposal, the fixed-based system and the base-isolation systems for the California State Building were further analyzed. That comparison is generally consistent with the discussion of the proposed project and Alternative 4 herein. The

Design Proposal review concluded that the fixed-base system was more appropriate, and rejected base-isolation, for the following major reasons:

- The HSH team has acknowledged that the shear-wall approach would have a greater effect on interior features of the California State Building than would base-isolation approach. The HSH team, including its historic preservation architect, Page & Turnbull, believes that the proposed shear-wall structural renovation would result in a project, after design development, that would meet the Secretary of the Interior's Standards for rehabilitation of historic buildings.

- The space planning required for corridor connections between the two buildings with base-isolation would substantially affect design of interior public spaces, including proposed exposure of the north facade of the California State Building. On upper floors, each connecting corridor would require a vestibule room, roughly 8 ft. deep (north-south) and 24 ft. long, to accommodate all possible motions of the corridor platform cantilevering from the California State Building.

- The moat required for base-isolation would adversely affect the exterior character of the California State Building.

- Base isolation would cost an estimated $6,000,000 more than the proposed shear-wall system.

E. OTHER ALTERNATIVES CONSIDERED AND REJECTED

During the project planning process, other alternatives that would provide the required 1,050,000 gross sq. ft. of space in San Francisco were considered, and rejected, as discussed in the Notice of Preparation for this EIR (see Appendix A). For informational purposes, these rejected alternatives are described below. With the possible exception of the Transbay Terminal, none of these sites by themselves could meet project objectives to provide about 1,000,000 sq. ft. The 150 Oak Street and Central Freeway alternatives discussed below assumed renovation and re-use of the existing California State Building and Annex.

TRANSBAY TERMINAL SITE

The Transbay Terminal is at Mission Street between Fremont, First and Howard Streets about two miles from the Civic Center (see Figure 39, p. 221). Including the building and bus ramps, the Transbay Terminal is approximately five acres. Caltrans is working with the City of San Francisco to plan its ultimate use. Surrounding land use consists of high-rise offices, mixed commercial and industrial buildings.

The Transbay Terminal location would not meet the legislative requirements to site the project in the San Francisco Civic Center. The site is close to BART and Muni service, and to bus stops along Market Street, and the location would meet the objective of maximizing air quality and congestion management benefits. If the site were to be the single location of state offices in San Francisco, it would not meet the objective of utilizing to the greatest extent possible the State's existing real estate assets. It would not result in renovation of the California State Building with a structural system supporting a long life-span and quick re-occupancy after an earthquake. If the site were to be developed as an office building, with the existing California State Building and Annex, it would not meet the objective of consolidating state agencies to a single site. Finally, the City and Caltrans have not determined the ultimate use of the property, so it would not meet the objective of developing space in the most timely manner.

150 OAK STREET SITE

The 150 Oak Street site was formerly Caltrans' District 4 headquarters and consists of 197,000 gross square feet of office space plus other property across Oak Street used for parking (see Figure 39, p. 221). Caltrans District 4 now occupies a new headquarter in Oakland. Caltrans is directed by legislation to sell the property to reduce bond payment costs on its new headquarters in Oakland, and has offered the property for sale. The existing building would not meet the current space demand for the project. The *San Francisco/Oakland State Facilities Plan* estimated the Caltrans site could accommodate approximately 290,000 gross sq. ft. with renovation and addition of space, or 355,000 gross sq. ft., assuming demolition and rebuilding on-site.

The alternative would not meet the legislative requirements to locate the state office building in the San Francisco Civic Center. The site is close to BART and Muni service, and to bus stops along Market Street, and the location would meet the objective of maximizing air quality and congestion management benefits. With this split development, this alternative would not meet the criteria to consolidate state agencies to a single site to achieve more efficient public service. Because the Department of General Services would have to purchase the site and building, rather than use its own property, this alternative would not provide the most cost-effective consolidation project on state-owned land. Because of the need to obtain new property, the alternative would not provide office space in the most timely manner. It would not result in renovation of the California State Building with a structural system supporting a long life-span and quick re-occupancy after an earthquake. While development of the site would utilize the

State's real estate assets, it would not maximize the use of Department of General Services assets.

CENTRAL FREEWAY PROPERTIES

This alternative is a group of properties owned by Caltrans where, prior to the Loma Prieta Earthquake, US 101 traffic connected to surface streets (see Figure 39, p. 221). The properties are in a strip between Elm, Grove, Gough and Franklin Streets. The largest property is a half-block along Franklin between Golden Gate and McAllister. The *San Francisco/Oakland State Facilities Plan* estimated the maximum development potential of the Central Freeway property, combined with an adjacent Employment Development Department building, at 440,000 gross sq. ft. In combination with California State Building and the existing Annex, this would meet the ten-year space demand.

Legislation requires Caltrans to consult with San Francisco prior to disposing of the property. The City is preparing a plan for re-use of these properties. The properties are west of Franklin Street, outside the historic Civic Center district. While the Central Freeway property is closer to the Civic Center than either the Transbay Terminal or 150 Oak Street sites, it remains on the periphery, and any building constructed would not be clearly connected with the Civic Center.

Use of the Central Freeway properties would disperse state offices to three sites, in place of the single site of the proposed project. While this property is in proximity to the State Building at 505 Van Ness Avenue, it would not meet the statutory requirement to locate the facility in the Civic Center. It also would not meet the project objective that state agencies be consolidated to a single site to achieve more efficient public service. The site would support the concept of utilizing the State's existing real estate assets. However, it would not provide the most cost effective project, as the disposition of the property is dependent upon completion of a City's plan for the area. That plan has not been finalized, so the site could not meet the objective of developing the consolidated space in the most timely manner. It would not result in renovation of the California State Building with a structural system supporting a long life-span and quick re-occupancy after an earthquake. Finally, use of this property for a state office building may not ultimately be in scale with future nearby land uses.

NOTES - Alternatives Analysis

1 Department of General Services, Office of Project Development and Management. *San Francisco State Office Building Alternatives - Economic Analysis*, July 11, 1994. The analysis assumes the same total gross floor area for the project and the two alternatives, O&M costs of $6.60 per sq. ft. per year in 1998, and a bond interest rate of 6.5%.

2 The 525 Golden Gate Avenue building is about 184,000 gross sq. ft. For purposes of comparison of alternatives that would provide the same usable floor area as the project, the older building is assumed to have a smaller gross floor area, commensurate with a lower ratio of usable floor area.

3 Edward Levine, Director of Facilities, Hastings College of the Law, telephone conversation, July 28, 1994.

4 Department of General Services, Office of Project Development and Management. *San Francisco State Office Building Alternatives - Economic Analysis*, July 11,1994. The analysis assumes the same total gross floor area for the project and the two alternatives, O&M costs of $6.60 per sq. ft per year in 1998, and a bond interest rate of 6.5%.

5 Mark S. Jokerst, SE, Associate, Forell-Elsesser Engineers, Inc., letter to Mr. Bobby Hood, HSH Design-Build, Inc., October 17, 1994.

V. CEQA FINDINGS

A. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT WERE IMPLEMENTED

In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Section 15040, 15081 and 15082 of the State CEQA Guidelines, this chapter identifies impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter III, Setting, Impacts and Mitigation.

Cumulative development in the Downtown & Vicinity in San Francisco (which includes the project site) would have a significant effect on the environment in that it would contribute to cumulative traffic increases as well as cumulative passenger loadings on MUNI, BART and other regional transit carriers. These cumulative transportation impacts would cause violations of fine particulate matter (PM_{10}) standards in San Francisco with concomitant health effects and reduced visibility. The proposed project would contribute to these cumulative effects.

B. GROWTH INDUCEMENT

The renovation of the California State Building would maintain the physical environment of the San Francisco Civic Center envisioned in the 1912 Civic Center Plan, and current planning efforts of the City of San Francisco. The New State Office Building would expand governmental services in the Civic Center, also responding to current State and City policies.

Net new employment in the Civic Center as a result of the project would total about 1,575 jobs. Not all of these jobs would be new to San Francisco. The extent that net new employment in the Civic Center would be net new employment in San Francisco would depend on the use of existing leased space vacated as a result of the project, and whether the new uses of the vacated space resulted in the creation of new net employment in San Francisco. If the project were to represent net new employment in San Francisco, the project would indirectly generate about 1,575 additional jobs.

The project consists of state offices expanding and/or relocating from other San Francisco locations, rather than new development in San Francisco. The indirect increase in employment due to the project would not, therefore, necessarily represent employment that is new to San Francisco. It is expected that some of the new indirect employment generated by the project would live in San Francisco. Employment growth, however, would not be reflected directly in increased demand for housing and City services to residents, as some new jobs would be held by individuals who already live and work in the City; who live in the City but previously worked outside the City or did not work; or who live outside the City. New employment would incrementally increase housing demand in San Francisco and other parts of the Bay Area.

The project would be built in a developed urban area, and no expansion of the municipal infrastructure not already under consideration would be required to accommodate new development and increased employment due to, or induced by, the project.

VI. DISTRIBUTION LIST

FEDERAL AGENCIES

Joan Byrens, Facilities Planner
U.S. General Services Administration
525 Market Street, 35th Floor
San Francisco, CA. 94105

David Look, Chief
Preservation Assistance Branch
U.S. Department of the Interior
National Park Service,
600 Harrison Street, Suite 600
San Francisco, CA 94107-1372

STATE AND REGIONAL AGENCIES

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604
Attn: Sally Germain

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Attn: Irwin Mussen

State Office of Intergovernmental Management
State Clearinghouse
1400 - Tenth Street
Sacramento, CA 94814

Regional Water Quality Control Board
2101 Webster, Suite 500
Oakland, CA. 94612

Cherilyn E. Widell, State Historic Preservation Officer
Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA. 94296-0001

Gary S. Adams
Caltrans, District 4
P.O. Box 23660
Oakland, CA. 94623-0660

Blesilda H. Gebreyesus
Senior Transportation Planner
Department of Transportation
P.O. Box 23660
Oakland, CA. 94623-0660

Barbara Fry
Air Resources Board
2020 L Street
Sacramento, CA. 95815

Betty Eubanks
State Lands Commission
1807 - 13th Street
Sacramento, CA. 95814

Brian Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yountville, CA. 94599

Steve Oliva
Department of Conservation
801 K Street, MS 24-02
Sacramento, CA. 95814

Loring A. Wyllie, Jr., Chairman
State Historic Bldg. Safety Code Board
H. J. Degenkold & Associates
350 Sansome Street
San Francisco, CA 94104

Robert E. Mackensen, AIA
Executive Director
State Historic Bldg. Safety Code Board
400 R Street, Fifth Floor
Sacramento, CA 95814

CITY AND COUNTY
OF SAN FRANCISCO

Mayor Frank Jordan
Room 200, City Hall
San Francisco, Ca 94102

Rudy Nothenberg
Chief Administrative Officer
Room 289, City Hall
San Francisco, CA 94102

John Taylor
Clerk of the Board
San Francisco Board of Supervisors
Room 235, City Hall
San Francisco, CA 94102

Louise Renne
City Attorney
Room 206, City Hall
San Francisco, CA 94102

Lucian Blazej
Director of Planning
Department of City Planning
1660 Mission Street
San Francisco, CA 94103

Barbara Sahm
Environmental Review Officer
Department of City Planning
1660 Mission Street
San Francisco, CA 94103

Susana Montana
Project Manager of Civic Center
Planning Study
Department of City Planning
1660 Mission Street
San Francisco, CA 94103

Vincent Marsh
Landmarks Board Secretary
Department of City Planning
1660 Mission Street
San Francisco, CA 94103

Alan Carlson, Executive Officer
San Francisco Superior & Municipal Courts
Room 313, City Hall
San Francisco, CA 94102

Norman Karasick
City Architect
30 Van Ness Avenue, Room 4100
San Francisco, CA 94102

Joanne Chow-Winship, Executive Director
San Francisco Arts Commission
25 Van Ness Avenue
San Francisco, CA 94102

Mayor's Office of Economic Planning
and Development
770 Golden Gate Avenue
San Francisco, CA 94102
Attn: Eila Arbuckle

San Francisco Fire Department
Division of Planning and Research
260 Golden Gate Avenue
San Francisco, CA 94102
Attn: Howard L. Slater

San Francisco Municipal Railway
MUNI Planning Division
949 Presidio Avenue, Room 204
San Francisco, CA 94115
Attn: Peter Straus

Recreation & Park Department
McLaren Lodge
Golden Gate Park
Fell and Stanyan Streets
San Franicsco, CA 94117
Attn: Deborah Learner

John Cribbs, Director
Department of Public Works
Room 260, City Hall
San Francisco, CA. 94102

San Francisco Real Estate Department
25 Van Ness Avenue, 4th Floor
San Francisco, CA 94102
Attn: Tony Delucchi,
Director of Property

John Newlin, Executive Director
Department of Traffic and Parking
25 Van Ness Avenue, Room 410
San Francisco, CA 94102

San Francisco Water Department
Distribution Division
425 Mason Street
San Francisco, CA 94102
Attn: Hans Bruno,
Assistant Manager

Robert A. Firehock
Deputy General Counsel
San Francisco Redevelopment Agency
770 Golden Gate Avenue
San Francisco, CA 94102

OTHER AGENCIES

Alameda County Board of Supervisors
1221 Oak Street
Oakland, CA 94612

Alameda County Planning Department
Planning Director
399 Elmhurst Street, Room 136
Hayward, CA 94544

City of South San Francisco
Planning Director
P. O. Box 711
South San Francisco, CA 94083

Contra Costa County Community
Development Department
Director
651 Pine Street
Martinez, CA 94553-0095

County of San Mateo
Planning Administrator
Environmental Management Department
590 Hamilton Street
Redwood City, CA 94063

GROUPS AND INDIVIDUALS

Nancy Clifford
American Federation of State, City and
Municipal Employees - Local 2620
District Council 57
2000 Embarcadero, Suite 201
Oakland, CA 94608-5300

American Institute of Architects
San Francisco Chapter
130 Sutter Street, Suite 600
San Francisco, CAS 94102

Richard T. Baker
Association of California State Attorneys
660 J Street, Suite 480
Sacramento, CA 95814

Jon Hamm
Executive Manager of Operations
California Association of
Highway Patrolmen
2030 V Street
Sacramento, CA 95818

Allen Grant
President
California Association of
Professional Scientists
660 J Street, Suite 480
Sacramento, CA 95814
Kenneth Murch
Consultant
California Association of
Psychiatric Technicians
2400 - 22nd Street, Suite 110
Sacramento, CA 95818

Tim Mahoney
Chief Administrative Officer
California Correctional Peace
Officers Association
3780 Rosin Court, Suite 200
Sacramento, CA 95834

Harold Rose,
State Rank and File Representative
California Department of Forestry
Employees Association
924 Enterprise Drive
Sacramento, CA 95825

Tut Tate,
Civil Service Division Manager
California State Employees' Association
1108 O Street
Sacramento, CA 95814

Cecil E. Riley
President
California Union of Safety Employees
2029 H Street
Sacramento, CA 95814

Center for SE Asian Refugee Resettlement
Vu-Duc Vuong
875 O'Farrell Street
San Francisco, CA 94109

Coalition for San Francisco Neighborhoods
Lorraine Lucas, President
San Francisco, CA 94142-5882

Concerned Business Persons of the
Tenderloin
Adam Gottstein, President
365 Eddy Street
San Francisco, CA 94102

The Reverend Kelly Cullen
133 Golden Gate Avenue
San Francisco, CA 94102

The Foundation for San Francisco's
Architectural Heritage
Executive Director
2007 Franklin Street
San Francisco, CA 94109

The Greater Market Street
Development Assoc.
Carolyn Diamond
870 Market Street
San Francisco, CA 94102

James Haas
Civic Pride
633 Battery Street, 5th Floor
San Francisco, CA 94111

Hayes Valley Merchants Association
Russell Pritchard
568 Hayes Street
San Francisco, CA 94102

Hastings College of Law
Edward Levine, Director of Facilities
100 McAllister Street
San Francisco, CA 94103

Winchell Hayward
308 Willard North
San Francisco, CA 94118

Sue C. Hestor
Attorney at Law
870 Market Street, Suite 1121
San Francisco, CA. 94102

Dennis Bonnifield
International Union of Operating Engineers
2211 Royale Road
Sacramento, CA 95815

Joe Kaufman
111 Jones Street
San Francisco, CA 94102-3921

Ed Michael
822 Franklin Street, Apt. 506
San Francisco, CA 94102

North of Market Planning Coalition
Kathy Berger, Director
295 Eddy Street
San Francisco, CA 94102

North of Market Senior Services
Vera Haile
333 Turk Street
San Francisco, CA 94102

Page & Turnbull
364 Bush Street
San Francisco, CA 94104

Richard T. Baker
Professional Engineers in
California Government
660 J Street, Suite 480
Sacramento, CA 95814

San Francisco Chamber of Commerce
Florence Kragen, Vice President
465 California Street
San Francisco, CA 94104

San Francisco Lawyers for Urban Affairs
Marsha Rosen
301 Mission Street, Suite 400
San Francisco, CA 94105

San Francisco Tomorrow
Jennifer Clary, President
54 Mint Street, #400
San Francisco, CA 94103-1815

South of Market Problem Solving Council
Ray Colenar
965 Mission Street
San Francisco, CA 94103

SPUR
City Planning and Development Committee
312 Sutter Street
San Francisco, CA 94108

SPUR
Tom Nolan, Executive Director
312 Sutter Street, Suite 500
San Francisco, CA 94107

Tenderloin Housing Clinic
Randy Shaw, Director
126 Hyde Street
San Francisco, CA 94102

Tenderloin Neighborhood Association
Hank Wilson
55 Mason Street
San Francisco, CA 94102

Tenderloin Neighborhood Development
Corp.
B.J. Barron
230 Hyde Street
San Francisco, CA 94102

Tenderloin Senior Organizing Project
Diana Samuelson
220 Golden Gate Ave., Room 410
San Francisco, CA 94102

Theatre Row Business Association
Kathy Opsather
490 Geary Street
San Francisco, CA 94102

U.N. Plaza Mid-Market Association
Brian Tench
1095 Market Stree6t, Suite 701
San Francisco, CA 94103

Gary Robinson
Executive Administrator
Union of American Physicians & Dentists
1330 Broadway, Suite 730
Oakland, CA 94612-2506

Van Ness Avenue Association
Greg Holzman
825 Van Ness Avenue, #501
San Francisco, CA 94109

William Turnbull Associates
Pier 1 - 1/2
San Francisco, CA 94118

MEDIA

San Francisco Chronicle
925 Mission Street
San Francisco, CA 94104
Attn: John King

San Francisco Examiner
P.O. Box 7260
San Francisco, CA 94120
Attn: Gerald Adams

The Tenderloin Times
Editor
290 Turk Street
San Francisco, CA 94102

Jane Hudson
San Francisco Public Library
Main Library
Civic Center
San Francisco, CA 94102

VII. ORGANIZATIONS AND PERSONS CONSULTED

LEAD AGENCY

San Francisco State Building Authority
Stan Moy, President
Leroy King
Donald Casper

California Department of General Services
Office of Project Development and Management
400 R Street
Sacramento, California 95814
Christal Waters, Senior Environmental Planner
Kevin Kaestner, Project Director

EIR CONSULTANTS

Environmental Science Associates, Inc.
301 Brannan Street, Suite 200
San Francisco, California 94107
Project Director: Marty Abell
Project Manager: Michael Rice

Carey & Co.
(Cultural Resources)
123 Townsend Street
San Francisco, California 94107
Bill Sugaya, Senior Associate

Dowling Associates
(Transit, Parking and Pedestrians)
180 Grand Avenue
Oakland, California 94612
John Dowden

Orion Environmental Associates
(Geology and Soils, Public Health and Safety, Air Quality, Noise)
The Ferry Building
San Francisco, California 94105
Joyce S. Hsiao, Principal

VIZability
(Visual Simulations)
Box 3509
Walnut Creek, California 94598
Robert A. Staehle, AIA

Bruce White, Ph.D.
(Wind Tunnel Analysis)
3207 Shelter Cove
Davis, California 95616

APPENDIX A: NOTICE OF PREPARATION / INITIAL STUDY

STATE OF CALIFORNIA—STATE AND CONSUMER SERVICES AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF GENERAL SERVICES
OFFICE OF PROJECT DEVELOPMENT AND MANAGEMENT
400 R STREET, SUITE 5100
S MENTO, CA 95814

NOTICE OF PREPARATION

TO:

Responsible and Reviewing Agencies
Interested Parties and Organizations

SUBJECT:

Notice of Preparation of a Draft Environmental Impact Report on the Seismic Retrofit, Renovation and New Construction of State Office Buildings in the San Francisco Civic Center

CO-LEAD AGENCIES:

San Francisco State Building Authority and State of California, Department of General Services

CONTACT:

Christal Waters, Senior Environmental Planner
State of California Department of General Services
Office of Project Development and Management
400 R Street, Suite 5100
Sacramento, California 95814

The Department of General Services, Office of Project Development and Management, will be the Lead Agency and will prepare an environmental impact report (EIR) for the project identified above. We need to know the views of public agencies as to the scope and content of the environmental information which is germane to the agency's statutory responsibilities in connection with the proposed project. We are also interested in comments from individuals and interested parties relating to the scope and content of the EIR. In responding to this Notice of Preparation, please provide the name and phone number of a contact-person for this project.

The project objectives, project description, location, a discussion of alternatives, and the potential environmental effects of the proposed project are contained in the attached materials. A copy of the Initial Study is attached.

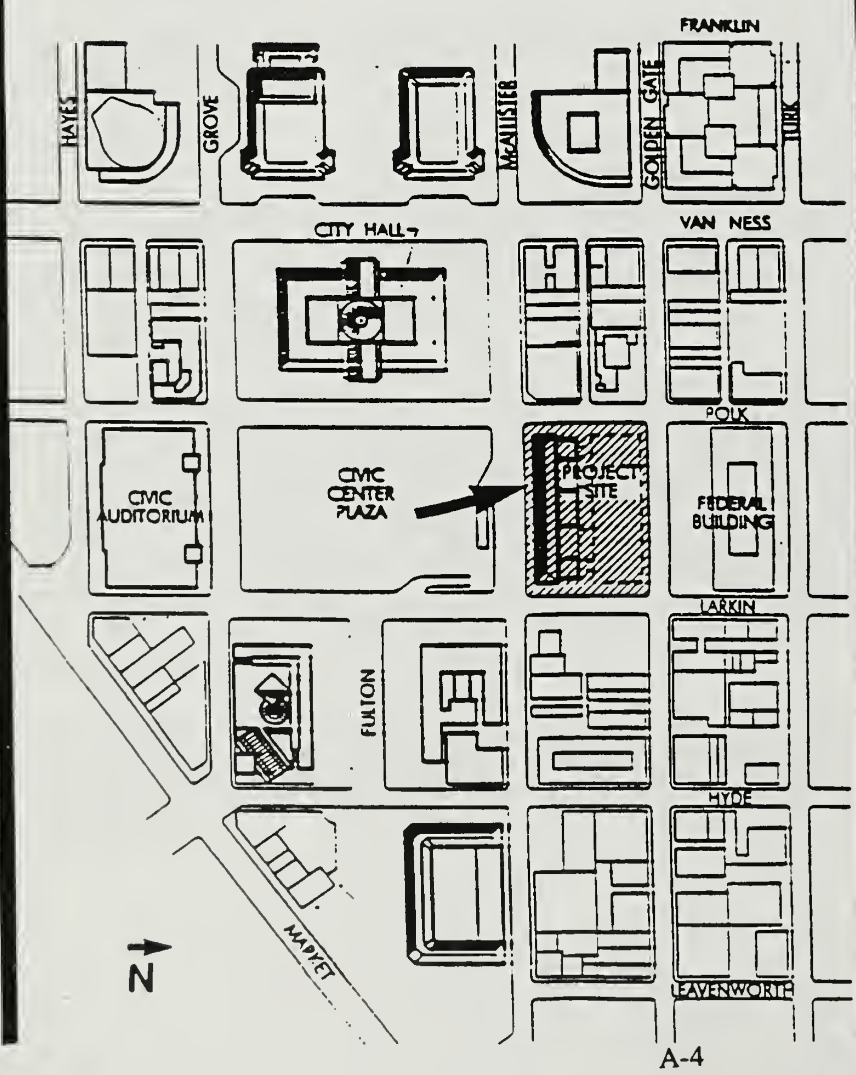
Due to the time limits mandated by state law, your response must be sent at the earliest possible date but **NOT LATER THAN 30 DAYS** after receipt of this notice.

Please send your response to Christal Waters at the address or facsimile number shown above.

Christal Waters for

Robert A. Sleppy, Manager
Project Development Unit

REGIONAL MAP



SITE MAP

NOTICE OF PREPARATION

PROJECT TITLE:

Seismic Retrofit, Renovation, and New Construction of State Office Buildings in the San Francisco Civic Center

PROJECT LOCATION:

350 McAllister Street and 455 Golden Gate Avenue
City and County of San Francisco

PROJECT DESCRIPTION:

The project consists of two physically connected projects. The first is the seismic retrofit, renovation and reuse of the historic state office building at 350 McAllister. The second is the demolition, new construction and operation of a state office building at 455 Golden Gate. The two buildings will be connected when completed.

Background. Three major state-owned office buildings in the San Francisco Bay Area were vacated following the 1989 Loma Prieta earthquake: the historic state building at 350 McAllister Street (excluding the 455 Golden Gate Avenue annex), 525 Golden Gate Avenue, and 1111 Jackson Street in Oakland. The state agencies occupying these buildings were relocated to various leased office facilities. The State Office Building at 505 Van Ness Street was not damaged and continues in use. In 1990, California voters approved the issuing of general obligation bonds for the seismic retrofit of buildings owned by state and local governments. In order to address the state's existing and future facilities needs, the San Francisco/Oakland State Facilities Plan (Plan) was prepared by the Department and published in May 1992. This plan provides a comprehensive guide for management and development of both state-owned and leased office facilities in the San Francisco Bay Area.

Based on the Plan and other information, the Department proposes to consolidate statewide-serving agencies in the San Francisco Civic Center and relocate regional-serving agencies to Oakland. Legislation enacted in September 1993 states legislative intent to maintain a strong presence of state offices in San Francisco by locating statewide-serving agencies in the San Francisco Civic Center (AB 896 - Statutes of 1993, Chapter 429).

The agency relocation plan and building program is currently in draft status, but will be finalized prior to issuance of the Draft Environmental Impact Report (EIR).

A proposal for disposition of the 525 Golden Gate building, vacated after the 1989 Loma Prieta earthquake, has not been developed at this time. The Draft EIR for this project will not address the potential environmental effects of disposition of 525 Golden Gate Avenue. This will be addressed separately once disposition has been determined. However, the Draft EIR will include an alternative analyzing the potential for re-use of the 525 Golden Gate Avenue building to reduce potentially significant environmental effects.

Project Objectives. The project goal is to provide consolidated state office space in San Francisco that will satisfy the 10-year growth needs of statewide-serving agencies in the Bay Area. In pursuing this goal, the Department of General Services is planning a project that will:

- consolidate state offices to the Civic Center, consistent with the direction of AB 896;
- maintain a strong presence of state offices in the Civic Center of San Francisco to provide economic support to the local community;
- consolidate state agencies to a single site that has the economic benefits of more efficient public service;
- consolidate state agencies into a single site that has the air quality and congestion management benefits to be gained from a site easily accessible to public transit;
- utilize to the greatest extent possible the State's existing real estate assets;
- provide the most cost effective consolidation project on state-owned land; and
- developing the consolidated space in the most timely manner.

Project Description. The project includes seismic retrofit, and renovation and reuse of the historic state office building at 350 McAllister Street, and demolition and new construction at 455 Golden Gate.

The method of seismic retrofit has not been determined, but it is likely that the 350 McAllister building will have internal structural reinforcements and other measures and will be secured to the new construction at 455 McAllister. The interior of 350 McAllister will be renovated following seismic retrofit. A historic building survey is currently being completed that will make recommendations for the extent of interior renovation. The exterior walls will be retained in their current form. The 350 McAllister Street office building will consist of approximately 252,000 gross square feet. The building will connect at the rear (north side) with the new construction at 455 Golden Gate.

The existing state office building at 455 Golden Gate Avenue will be demolished and replaced with a high-rise building of approximately 800,000 gross square feet, and will include approximately 60 parking spaces in the basement.

The total two-block project will consist of approximately 1,050,000 gross square feet.

PROBABLE ENVIRONMENTAL EFFECTS:

An Initial Environmental Study is included as part of this Notice of Preparation. In addition to the impacts associated with a construction project including noise, disruption of soils, impaired pedestrian and vehicular circulation, the following topics will need to be addressed in the

Environmental Impact Report: (1) air quality; (2) light, shadow and wind; (3) population density; (4) transportation systems, parking demand and traffic circulation; (5) aesthetic views; and (6) historic buildings and cultural resources.

ALTERNATIVES:

The California Environmental Quality Act requires the consideration of alternatives meeting the objectives of the proponent that may reduce significant environmental effects, including consideration of alternative sites. Alternatives may be rejected if they do not meet the basic project objectives, or if they would have greater environmental effects than the proposed project. The Department has considered both alternative regional locations for housing state Bay Area offices, and alternative locations specific to San Francisco. Two alternative locations specific to San Francisco will be considered further in the Draft EIR. These alternatives were selected with the concept of reducing the adverse effects of the proposed project relating to land use, historic resources, and microclimate, while meeting most of the project objectives. The remaining San Francisco locations, and the more generic alternatives of housing Bay Area state offices have been considered and dismissed. A summary of all alternatives follows.

<u>Alternatives that will be considered in the Draft EIR:</u>

A. Renovate and reuse 525 Golden Gate State Office Building, with a smaller building at 455 Golden Gate.

The Department of General Services controls property at 525 Golden Gate, the site of a state office building that has been vacant since the Loma Prieta earthquake. The Department eventually plans to dispose of the building. Renovation and re-use of 525 Golden Gate was considered and rejected during facilities planning because use of the three existing buildings (350 McAllister, and 450 and 525 Golden Gate) would supply only 785,000 gross square feet. This would not meet the ten-year space demand of approximately 1.05 million gross square feet. The building cannot be demolished for new construction because it houses the Division of Telecommunications' Calnet telephone central office switch for the Bay Area. This alternative assumes that a new building at 455 Golden Gate would still be required, but the height of that building could be reduced.

This alternative could be considered as a single extended site. The alternative would meet the objectives to:

- maintain a strong state presence in the Civic Center;
- consolidate state agencies to a single site to achieve more efficient public service;
- provide the air quality and congestion management benefits of a site that is easily accessible to public transit; and
- maximize the Department's use of its existing assets.

Feasibility of this alternative and its environmental effects relative to the proposed project will be examined in the Draft EIR. A brief economic analysis of this alternative will also be included.

B. New Construction on Hastings College of Law property, with a smaller building at 455 Golden Gate.

Hastings College of Law (Hastings) controls an approximately 38,000 square foot site at the southeast corner of the Larkin/Golden Gate intersection. The property includes a surface parking lot and the site of former student housing. The student housing was demolished following the Loma Prieta earthquake. Hastings has prepared a plan for use and development of its properties in and near the Civic Center. The Hastings plan proposed development of the City's Court Annex on the Larkin/Golden Gate property. However, the City selected a site on the northeast corner of Polk and McAllister, across Polk Street from the 350 McAllister building. A state government office building at the Larkin/Golden Gate property may also be acceptable to Hastings. A major issue in the development of the Hastings Plan was the loss of housing if the student housing is not replaced. Replacement housing would continue to be an issue associated with the site if it is used for a state office building.

Since the site is directly opposite Larkin from existing state office buildings, it may be perceived to be a single site, both from the point of view of the general public seeking state services, as well as from the employees commuting to the site. As a single site, it could meet project objectives to:

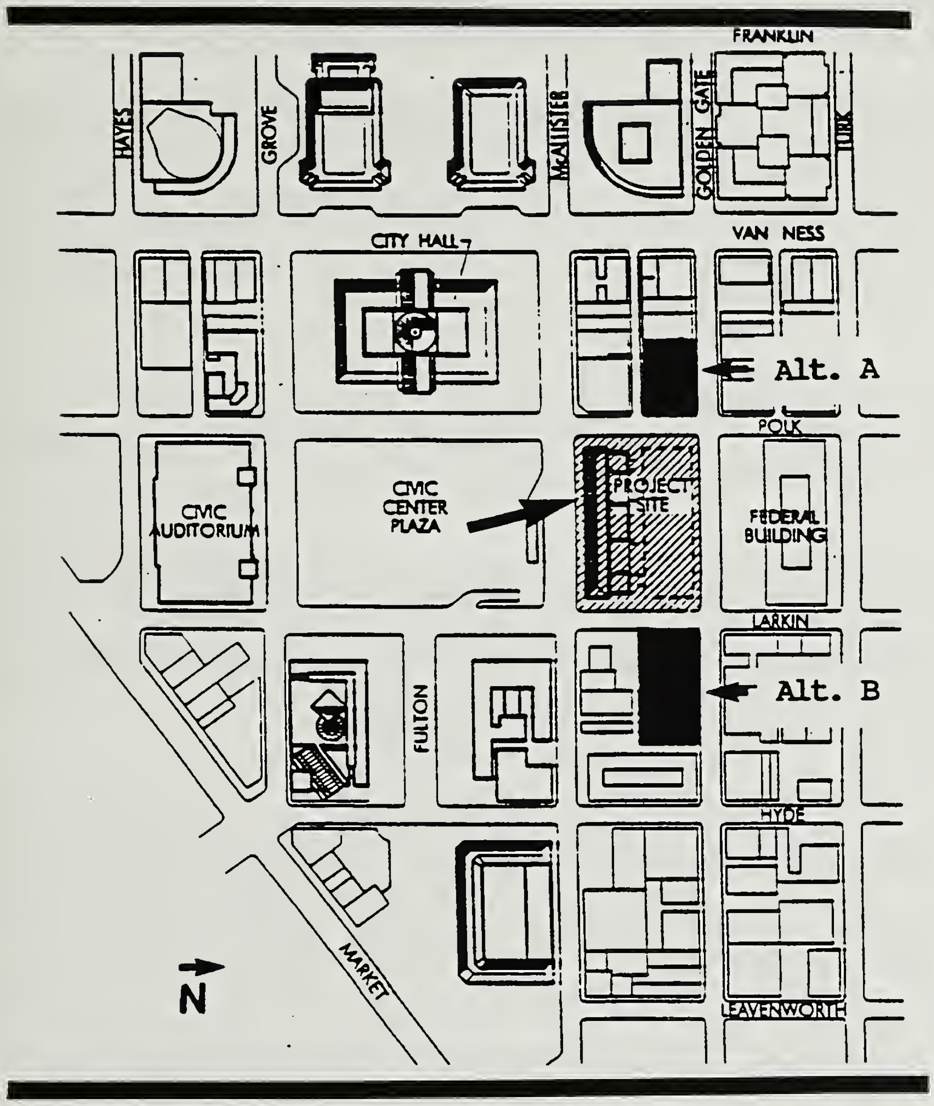
- maintain state offices in the Civic Center;
- consolidate state agencies to achieve the economic benefits of more efficient public services;
- achieve air quality and congestion management benefits; and
- use the State's existing real estate assets.

The Hastings College Facility Plan assumed that a 207,000 gross square foot building could be constructed on the site. The feasibility and environmental issues associated with a building of approximately this size, combined with the proposed project at reduced height, will be further analyzed in the Draft EIR. A brief economic analysis of this alternative will also be included.

C. No Project (Continue Leasing Space to Meet Long-term Needs).

This alternative would eliminate new construction at 455 Golden Gate and renovation of 350 McAllister. The existing building at 455 Golden Gate would continue to be used after its renovation for fire and life safety requirements. Long-term additional space demand of approximately 670,000 gross square feet (500,000 usable square feet) would be met by continuing to lease office space in dispersed locations. This space demand is currently not available at a single site to provide consolidation in the Civic Center.

The environmental effects of these alternatives will be examined further in the Draft EIR.



ALTERNATIVES THAT WILL BE CONSIDERED
IN THE EIR

Rejected Alternatives:

The first two rejected project alternatives address the broad issues of where, throughout the Bay Area, consolidatable agencies should be located. The analysis of these alternatives explains how the San Francisco State Office Building project was sized at approximately one million square feet. The remaining alternatives follow the direction of the immediate project goal to provide approximately one million square feet of space in San Francisco to house the Supreme and Appellate Courts and statewide agencies.

1. Retaining in San Francisco and consolidation of all the agencies currently located in San Francisco.

2. Relocating all statewide agencies to Oakland.

3. Developing other state-owned properties in place of, or in addition to the proposed project sites.

    a. Transbay Terminal site.
    b. 150 Oak Street property.
    c. Central Freeway right of way property (formerly part of Highway 101).

Alternative 1.: Retaining in San Francisco and consolidating office space for all the agencies currently located in San Francisco.

Under this alternative all statewide, regional and local-serving state agencies currently located in San Francisco would remain in San Francisco and would be housed at locations in the Civic Center.

The San Francisco/Oakland State Facilities Plan (Facilities Plan) identified a combined ten-year demand for approximately 1.36 usable square feet for agencies currently located in San Francisco. This figure includes the state-owned buildings that are currently occupied, such as the relatively new 505 Van Ness Building. Subtracting the 0.32 million usable square feet of state-owned office space at 505 Van Ness and locations outside the Civic Center, approximately 1.04 million usable square feet are needed to meet the ten-year demand of agencies in San Francisco. This equates to approximately 1.39 million gross square feet for comparison with the proposed project of 1.05 million gross square feet.

Assuming the 355 McAllister building is renovated and re-used, the difference between the proposed project and this alternative (.340 million gross square feet) could be housed by a combination of renovation of 525 Golden Gate and/or new construction at 455 Golden Gate. In comparison with the proposed project, building heights at 455 Golden Gate would be increased, with a concomitant increase in potentially significant adverse effects.

The facilities plan examined three approaches for locating this ten-year demand. The "service" approach proposed location of state offices closest to the demographic center of the central Bay Area region. The "state employee" approach posed location of state offices closest to state employee residences. The "lowest cost" approach reviewed cost factors as they relate to location. Application of these three approaches identified the Oakland-East Bay area as

closest to the demographic center; closest to state employee residences, both by general proximity and by public transit; and lowest in leasing costs.

Retaining all of the current state offices in San Francisco would continue the practice of housing region-serving state offices in a location that is distant from the regional population center and the center of employee residences. In addition, the increased building height required to consolidate state offices in the Civic Center would cause the new buildings to exceed the height of the proposed project in the historic Civic Center District.

This alternative was rejected for its relatively greater adverse effects on local views and the historic district. The alternative was also rejected because retaining regional-serving agencies in San Francisco placed them at a greater distance from the centers of both the general population and employee residences, with the potential for increased future air quality and traffic congestion effects.

<u>Alternative 2.</u>: Relocating all state agencies to Oakland.

Under this alternative, all statewide and region-serving state agencies (except the Public Utilities Commission and local-serving agencies) would be housed in Oakland, resulting in a relocation of approximately 1.29 million gross square feet (970,000 usable square feet at five-year demand) from San Francisco to Oakland.

This solution does not consider the economic loss to the San Francisco Civic Center. Further, the alternative provides no support for the reuse or maintenance of the existing state buildings at 350 McAllister and 455 Golden Gate.

In addition, this alternative was rejected because it did not meet the project objectives to:

> maintain a strong presence of state offices in the Civic Center, as required by state statute; and
>
> utilize to the greatest extent possible the State's existing real estate assets.

<u>Alternative 3.</u>: New Construction on Other State-owned Property in San Francisco

The State owns several unused or underused properties in San Francisco, although not all of them are controlled by the Department of General Services. The properties and their controlling agencies are:

Transbay Terminal - Caltrans
150 Oak Street - Caltrans
Central Freeway Right of Way - Caltrans
Larkin/Golden Gate - Hastings College of Law
525 Golden Gate - Department of General Services

As noted above, the Hastings College of Law site, and the 525 Golden Gate site will be analyzed further in the Draft EIR. The remaining sites have been rejected for the reasons stated below.

With the possible exception of the Transbay Terminal, none of these properties by themselves could meet project objectives and provide 800,000 to 1,000,000 million square feet. The 150 Oak Street and Central Freeway alternatives discussed below assume renovation and re-use of the existing 350 McAllister and 455 Golden Gate buildings.

Transbay Terminal:

The Transbay Terminal is located on Mission Street between Fremont, First and Howard streets, in the westerly two-thirds of the block. Including the building and bus ramps, the Transbay Terminal measures approximately five acres. Caltrans intends to surplus the property, as it is no longer used as a transit transfer center, and is working with the City of San Francisco to plan its ultimate use. Surrounding land use consists of high-rise offices, mixed commercial and industrial buildings. A large high-rise multi-residential project is proposed to the west.

The Transbay Terminal location does not meet the legislative requirements to site the facility in the San Francisco Civic Center. If the site were to be the single location of state offices in San Francisco, it would not meet the objective of utilizing to the greatest extent possible the State's existing real estate assets. If the site were to be developed as an adjunct office building, keeping the existing 455 Golden Gate and 350 McAllister buildings, it would not meet the objective of consolidating state agencies to a single site. Finally, the City and Caltrans have not determined the ultimate use of the property, so it does not meet the objective of developing space in the most timely manner.

150 Oak Street Site:

The 150 Oak Street property was Caltrans' District 4 headquarters and consists of 197,000 gross square feet of office space plus other property across the street that was used for parking space. Caltrans is directed by legislation to sell the property in order to reduce bond payment costs on its new District 4 headquarters in Oakland, and has offered the property for sale. The existing building would not meet the current space demand. The property was examined in the San Francisco/Oakland State Facilities Plan for its development potential. The Plan estimated the site could accommodate approximately 290,000 gross square feet with renovation and addition of space, or 355,000 gross square feet, assuming demolition and rebuilding on-site.

The alternative would not meet the statutory requirements of locating the state office building in the San Francisco Civic Center. The site is close to Bart and Muni stations, and to bus stops along Market Street, so the location would easily meet the objective of maximizing air quality and congestion management benefits. By this split development, this alternative would not support the criteria to consolidate state agencies to a single site to achieve more efficient public service. Because the Department would have to pay Caltrans for the site and building, whereas use of its own property comes at no cost, this alternative would not provide the most cost effective consolidation project on state-owned land. Because of the need to obtain new property, the alternative would not provide office space in the most timely manner. While development of the site would utilize the State's real estate assets, it would not maximize the use of Department of General Services assets.

Central Freeway Property:

This is a group of properties owned by Caltrans where, prior to the Loma Prieta Earthquake, Highway 101 traffic from Interstate 80 connected to surface streets. The properties are located in a strip between Elm, Grove, Gough and Franklin Streets. The largest property is a half-block along Franklin between Golden Gate and McAllister. The Plan placed the maximum development potential of the Central Freeway property, combined with an adjacent EDD building, at 440,000 gross square feet. In combination with 350 McAllister and the existing 455 Golden Gate, this would meet the ten-year space demand.

Legislation requires Caltrans to consult with San Francisco prior to disposing of the property. The City is preparing a plan for re-use of these properties. The properties are outside the historic civic center district; the front of the property along Franklin Street views the back of the 505 Van Ness State Office Building.

While the Central Freeway property is closer to the Civic Center than either the Transbay Terminal or 150 Oak Street, it remains on the periphery, and any building constructed would not be clearly connected with the Civic Center.

Use of the Central Freeway properties would continue the dispersal of state offices to three sites, in place of the single site of the proposed project. While this property is in close proximity to the State Building on Van Ness, it would not meet the statutory requirement to locate the facility in the Civic Center. It also does not meet the project objective that state agencies be consolidated to a single site to achieve more efficient public service. The site would support the concept of utilizing the State's existing real estate assets. However, it would not provide the most cost effective project, as the disposition of the property is dependent upon completion of a City's plan for the area. That plan has not been finalized, so the site could not meet the objective of developing the consolidated space in the most timely manner. Finally, use of this property for a state office building may not ultimately be in scale with future nearby land uses.

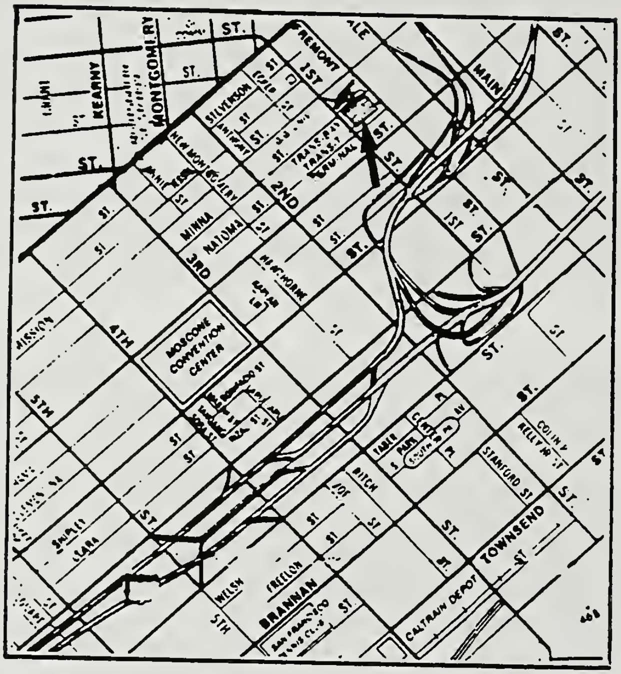
Alternative 1 (Consolidating all San Francisco state office space to the Civic Center), Alternative 2 (Relocating all San Francisco state office space to Oakland) and Alternative 3 (New Construction on other state-owned properties) will not be considered further.

NOTICE OF PREPARATION/INITIAL STUDY PREPARERS:

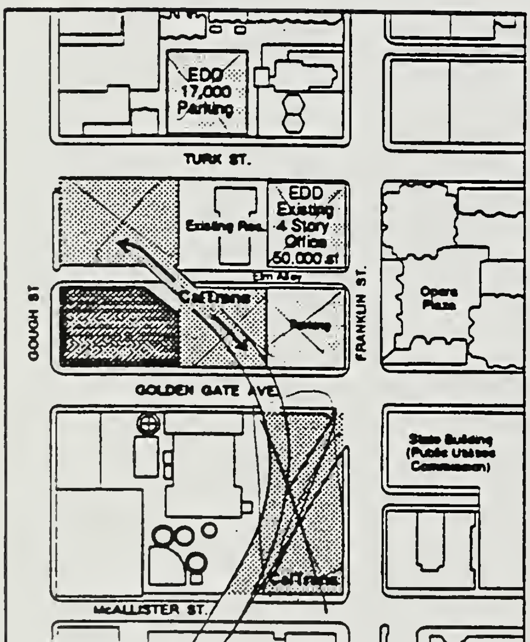
Carol Guilbault, Associate Environmental Planner
Christal Waters, Senior Environmental Planner
Department of General Services
Office of Project Development and Management

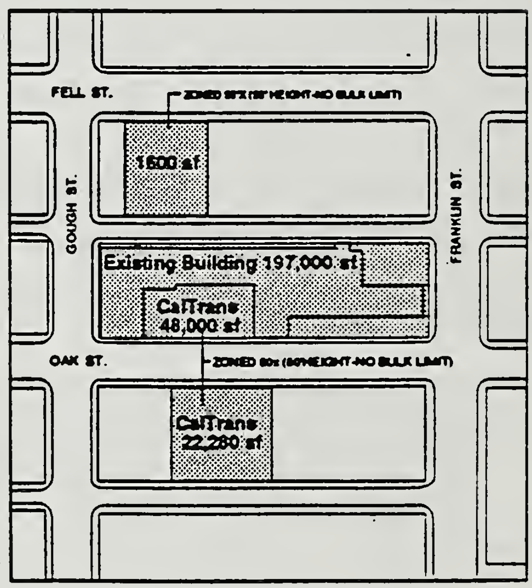
Date: Dec. 29, 1993

ALTERNATIVE 3
OTHER STATE-OWNED PROPERTY



Transbay Terminal





150 Oak Street

DGS-owned property
Other State-owned property
City-owned property

Central Freeway Property

INITIAL ENVIRONMENTAL CHECKLIST
SAN FRANCISCO STATE OFFICE BUILDING
350 McAllister Street/455 Golden Gate Avenue

A. Earth. Will the proposal result in:	Yes	Maybe	No
1. Unstable earth conditions or changes in geologic substructures?			x
2. Substantial changes to topography or any ground surface relief features?			x
3. The destruction, covering or modification of any unique geologic or physical features?			x
4. Exposure of people or structures to geologic hazards (earthquakes, slides, subsidence, liquefaction, ground failure or similar hazards)?	x		
5. Disruptions, displacements, compacting or overcovering of the soil?	x		
6. Increased erosion of soils from wind or water, either on or off the site?			x
7. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			x

A.4 The seismic retrofit of the historic building at 350 McAllister is intended to repair damage from the 1989 Loma Prieta earthquake, and installation of a seismic retrofit system will reinforce it against future earthquakes. Geotechnical reports exist for the 350 McAllister portion of the proposed project and will be summarized in the EIR. A geotechnical report will be prepared for the 455 Golden Gate portion of the project by a California-licensed geotechnical engineer. The replacement building will be designed and constructed to current seismic standards for this area. Geologic and seismic concerns, including a summary of the geotechnical reports and a discussion of seismic issues, will be included in the EIR.

A.5 Soils will be disrupted during the excavation around and possibly beneath the 350 McAllister Street building. This is required to enable the structure to be retrofitted to meet current seismic codes. Disruption of soil will also occur during demolition of the existing 455 Golden Gate Avenue building, and during construction of a new building on that site. No major import or export of soil is expected on either the McAllister Street or Golden Gate Avenue site.

A.6/7 The proposed project will not substantially change existing erosion conditions either on site or into the San Francisco Bay. Although dewatering of the site during excavation may be necessary, groundwater pumped from the site will be retained in a holding tank to allow suspended particles to settle and reduce the amount of sediment entering the storm drain/sewer lines. Watering down of the site will be required to reduce dust generation consistent with the City of San Francisco and Bay Area Air Quality Management District regulations.

	Yes	Maybe	No
B. Air Quality/Climate Will the proposal result in:			
1. Violation of any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	___	_x_	___
2. Exposure of sensitive receptors to substantial pollutant concentrations?	___	_x_	___
3. Creation of objectionable odors?	___	___	_x_
4. Alteration of wind, moisture or temperature (including sun/shading effects) so as to substantially affect public areas, or change the climate either in the community or region?	___	_x_	___

B.1 Long term air quality effects could be expected from the proposed project related to use and operation of the facilities, along with short term impacts from construction activity. The San Francisco/Oakland State Facilities Plan (May 1992) prepared for the Department of General Services calls for consolidation of state office facilities in both Oakland and San Francisco, and involves some state offices currently housed in San Francisco to relocate to Oakland. The potential air quality impacts related to commute mode changes of employees of agencies affected by relocation to Oakland will be addressed as part of the transportation study included in the Environmental Impact Report. Potential effects on air quality due to growth in employee staffing and visitors will also be addressed in the EIR.

B.2 Construction activities would temporarily affect local air quality. The project will take approximately 30 months to complete, and dust particles associated with the demolition and construction phases of the project will require the contractor to wet down the construction site. The contractor will be required to maintain and operate construction equipment to minimize exhaust emissions. Contractors will also be required to properly cover excavated soil, aggregates, and other materials at the site and during transit.

B.3 Demolition and construction activities will not involve burning of any materials and would not create objectionable odors.

B.4 The changes in wind, sun and shading resulting from the proposed high-rise tower on the site of the state office building at 455 Golden Gate will be

addressed in the EIR. The City of San Francisco's wind and human comfort concerns will be analyzed in the EIR using City of San Francisco planning criteria. The EIR will contain diagrams illustrating the seasonal effects of sun and shading resulting from the project.

	Yes	Maybe	No
C. <u>Water</u>. Will the proposal result in:			
1. Substantial degradation of water quality or public water supply?	___	___	_x_
2. Substantial degradation or depletion of groundwater resources, or interference with groundwater recharge?	___	___	_x_
3. Substantial erosion, siltation or flooding?	___	___	_x_
4. A change in the absorption rates, drainage patterns, or the rate and amount of surface runoff?	___	___	_x_
5. Alterations to the course or flow of flood waters?	___	___	_x_
6. Exposure of people or property to water related hazards such as flooding or tidal waves?	___	___	_x_
7. Substantial reduction in the amount of water otherwise available for public water supplies?	___	___	_x_
8. Alteration of the direction or rate of flow of groundwaters?	___	___	_x_
9. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?	___	___	_x_

C.2 The geotechnical report prepared for this project will determine the level of groundwater on the site, and the need for dewatering during construction. This information will be included in the EIR.

C.3 Refer to discussion in item A.6/7 above.

C.4 The majority of the site is presently covered by impervious materials and will remain so with the proposed project. The general drainage pattern of the site will not be altered; site runoff will drain into the City's combined sanitary and storm sewer system.

	Yes	Maybe	No
D. Vegetation. Will the proposal result in:			
1. A change in the diversity of species, or numbers of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	___	___	_x_
2. Substantial effect on any unique, rare or endangered species of plants or the habitat of the species?	___	___	_x_
3. The introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	___	___	_x_
4. A reduction in acreage of any agricultural crop?	___	___	_x_
5. Removal of substantial numbers of mature, scenic trees?	___	___	_x_

D.1-D.5 The existing condition of the site includes a small amount of landscaping plants typical of an urban environment. There are no endangered species of plants nor mature scenic trees on the site. Appropriate replacement landscaping will be provided at the completion of construction. This topic will not be discussed in the EIR.

	Yes	Maybe	No
E. Wildlife. Will the proposal result in:			
1. Substantial affect on the diversity of species or numbers of any species or animals (birds and animals, including reptiles, fish and shellfish, benthic organisms, or insects)?	___	___	_x_
2. A reduction of the numbers of any unique, rare or endangered species of animals?	___	___	_x_
3. Introduction of new species of animals into an area, or result in a barrier to the migration or movement to animals?	___	___	_x_
4. Substantial reduction of existing fish or wildlife habitat, or interference with the movement of resident or migratory fish or wildlife?	___	___	_x_

E.1-E.4 The wildlife are typical of species found in an urban environment. No rare or endangered species will be affected by the proposed project, nor does the project site provide a unique wildlife habitat. This topic will not be discussed in the EIR.

	Yes	Maybe	No
F. <u>Land Use</u>. Will the proposal result in:			
1. A substantial alteration of the present or planned land use in the area?	___	_x_	___
2. A conflict with local, state or federal land use plans or elements to those plans?	___	_x_	___
3. A disruption or division in the physical arrangement of an established community?	___	_x_	___
4. A substantial impact upon the existing character of the vicinity?	___	_x_	___

F.1/2 The project site (350 McAllister/455 Golden Gate) is state-owned property. It is zoned P (Public) by the City of San Francisco. The proposed state office building project is a principal permitted use within this designation, and the project does not represent a change from the City of San Francisco's present or planned land uses within the Civic Center area. However, while not subject to the local General Plan, the new high-rise tower proposed for the 455 Golden Gate portion of the project exceeds the 80-foot height limitation for the site. Assessment of the effects of the height of the proposed tower on the surrounding land uses will be addressed in the EIR.

F3. The seismic retrofit and remodeling of 350 McAllister building will need to consider preservation of the historic architectural elements of the existing building and setting. As this building is listed on the National Register of Historic Places, the proposed project requires consultation, coordination and review by the State Office of Historic Preservation. In addition, consultation with the San Francisco Landmarks Preservation Board and other local historic groups will be undertaken during the environmental process and issues will be addressed in the EIR.

F.4 The proposed office building is a permitted land use as defined in the City of San Francisco's zoning regulations; but it is recognized that the Civic Center area is also adjacent to an inner city residential community. Although the proposed building will increase the density of office space on the proposed site, a portion of tenants of the proposed building are a reconsolidation of state offices which were housed in scattered locations within and near the Civic Center area after the Loma Prieta earthquake. Another portion of the state employees will be added to the Civic Center area from various locations in San Francisco, but the overall number of will not represent a significant increase over existing conditions. Additionally, several state offices will be relocating their office locations from San Francisco to a new state office building proposed for construction in Oakland. The project's potential impact on the adjacent residential community will be further addressed in the EIR.

	Yes	Maybe	No
G. Visual Quality. Will the proposal result in:			
1. Obstruction of any scenic vista or view now observed from public areas?	___	_x_	___
2. A substantial, demonstrable negative aesthetic effect?	___	_x_	___
3. New light or glare substantially impacting other properties?	___	_x_	___

G.1 The EIR will discuss the project's appearance and possible effects on views, especially in the Civic Center. The historic visual quality of the 350 McAllister building will not be significantly altered during the seismic retrofit and remodeling process. Construction of the high-rise tower proposed at 455 Golden Gate could result in a change of views from the Civic Center buildings and plaza, as well as obstruction of views of the Civic Center buildings and plaza from other areas of the City.

G.2 The proposed project includes construction of a high rise office tower on the 455 Golden Gate Avenue site. The potential effects on visual quality created by the proposed project will be addressed in the EIR.

G.3 The proposed project is not expected to include significant new sources of external lighting since the structure will be a conventional office building. However, the effects of the design will be addressed in the EIR with regard to light and glare.

	Yes	Maybe	No
H. Human Population. Will the proposal result in:			
1. Substantial growth inducement or concentration of population?	___	___	_x_
2. Displacement of a large number people (involving either housing or employment)?	___	___	_x_

H.1 The proposed project will not cause substantial growth inducement. The tenants of the proposed state office building project are state agencies already located in scattered office space locations within the Civic Center and downtown San Francisco area. Although the intent of the project is to consolidate these offices into a single state-owned facility, the consolidation does not represent substantial concentration since many of the offices are already housed within the Civic Center and nearby areas. The EIR will describe the state agencies to be included in this consolidation project, their present locations, and the number of employees involved. However, backfill of existing leased or vacated facilities will eventually result in new employees. Potential population increase related to backfill of leases and the ultimate disposal of the state building at 525 McAllister will be addressed in the EIR.

H.2 Employees of state agencies presently occupying 455 Golden Gate will be temporarily relocated to other facilities during demolition of the existing building and construction of the new facility. In addition, some state offices presently housed in San Francisco will be relocating to a proposed new state office building in Oakland. The EIR will include a listing of which agencies will be involved in relocating to Oakland, and how many state employees will be included in this relocation.

	Yes	Maybe	No
I. <u>Housing</u>. Will the proposal create a substantial demand for additional housing or substantially reduce the housing supply?			x

No housing will be displaced from the project site or built on the site. Therefore, the project will not directly affect housing supply. The intent of the proposed project is to consolidate scattered state offices already in Civic Center and downtown San Francisco into a single location. This consolidation is not expected to affect the existing residential locations of employees of the state agencies being consolidated. The EIR will include discussion of residential location of state employees in San Francisco affected by the proposed project, as well as the state offices and employees which will be relocating to Oakland. Potential housing demand generated by population increases estimated in the Population Section will be discussed in the EIR.

J. <u>Transportation/Circulation</u>. Will the proposal result in:

	Yes	Maybe	No
1. An increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?		x	
2. A substantial increase in parking demand which cannot be accommodated by existing parking facilities?		x	
3. A substantial increase in transit demand which cannot be accommodated by current transit capacity?		x	
4. An increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	x		
5. Interference with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	x		
6. Alterations to waterborne, rail or air traffic?			x

J.1 Traffic and circulation patterns will be affected during construction of the proposed project; particularly since there are several new construction projects underway and proposed in the Civic Center area, combined with the on-going seismic retrofit of existing Civic Center buildings. The Civic Center Coordinating Committee will be consulted regarding organization of construction processes among the various projects. The EIR will address the project-generated as well as cumulative impacts on circulation and traffic. Cumulative traffic impact analysis will be coordinated with the most recent City cumulative traffic studies.

J.2 Parking will be affected primarily during construction of the proposed project, combined with other Civic Center area projects in process. Coordination among these various projects to accommodate parking for construction workers, truck routes and deliveries of building materials is necessary, and the process will be addressed in the EIR. Sixty (60) permanent parking spaces will be included in the 455 Golden Gate Avenue portion of the project. Potential demand for employee and public parking will be addressed in the EIR.

J.3 The additional number of state employees generated by potential growth of state agencies housed in the proposed project may increase transit demand. Also, employees relocating to the Civic Center may come from areas less well-served by transit, and therefore may increase transit demand in the Civic Center. The EIR will present employee commute information collected by the Caltrans travel survey database. Comparison to City of San Francisco transportation measurements will be presented.

J.4 There will be a potential increase in traffic hazards to vehicles, bicyclists and pedestrians during the construction of the proposed project, combined with the other on-going and proposed projects in the Civic Center area. These issues will be addressed in the EIR.

J.5 The proposed project may interfere with existing transit routes during construction of the proposed project, as well as other Civic Center projects. Routes along McAllister Street will be affected, along with overall circulation patterns in the area. The coordination between the various projects to accommodate transit during construction will be addressed in the EIR.

	Yes	Maybe	No
K. Noise. Will the proposal result in:			
1. A substantial increase in ambient noise levels for adjoining areas?	___	x	___
2. Exposure of people to severe noise levels?	___	___	x
3. An effect on noise sensitive receptors near or on the project site?	___	x	___

K.1-K.3 Demolition, excavation and building construction will temporarily increase noise in the site vicinity. Project construction noise and its possible effects on sensitive receptors such as nearby residences and offices will be addressed in the EIR.

Following construction, project operation would not result in perceptibly greater noise levels than those existing in the area. To produce a noticeable increase in environmental noise, a doubling of existing traffic volume would be required; traffic increases of this magnitude would not occur with anticipated cumulative development including the project. (Downtown Plan EIR, Vol. 1, Section IV.E and Section IV.J., pp. IV.J.8-18.)

	Yes	Maybe	No
L. Cultural Resources. Will the proposal result in:			
1. Disruption or destruction of a prehistoric or historic archaeological site of cultural significance to a community or ethnic or social group?	___	_x_	___
2. Adverse physical or aesthetic effects to a prehistoric or historic building, structure or object?	___	_x_	___
3. A physical change which would affect unique ethnic cultural values?	___	___	_x_
4. Restriction of existing religious or sacred uses within the potential impact area?	___	___	_x_

L.1 The EIR will address the possibility of encountering subsurface cultural resources that may be discovered during the seismic retrofit of 350 McAllister and excavation for construction of the proposed new building at 455 Golden Gate.

L.2 The state offfice building at 350 McAllister Street is listed on the National Register of Historic Places as part of the Civic Center complex. This structure is covered by the City of San Francisco landmark ordinance, and also is being considered for inclusion in a potential historic district under Article 10 of the City Planning Code. This architectural resource and the proposed project's effect on surrounding architectural resources will be addressed in the EIR. Consultation with the State Office of Historic Preservation, the City of San Francisco Landmarks Advisory Board has been initiated.

	Yes	Maybe	No
M. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
1. Fire protection?	___	___	_x_
2. Police protection?	___	___	_x_

	Yes	Maybe	No
3. Schools?	___	___	_x_
4. Parks or other recreational facilities?	___	___	_x_
5. Maintenance of public facilities including roads?	___	___	_x_
6. Other governmental services?	___	___	_x_

The proposed project would increase demand for public services, but not beyond what would be expected in the project area. Project planning will include contact with service providers to confirm service availability.

N. Utilities and Service Systems. Will the proposal result in a need for new systems, or substantial alterations to the following utilities with capacities to serve new development:

	Yes	Maybe	No
1. Power or natural gas?	___	___	_x_
2. Communications systems?	___	___	_x_
3. Water?	___	___	_x_
4. Sewer trunk lines?	___	___	_x_
5. Storm water drainage?	___	___	_x_
6. Solid waste and disposal?	___	___	_x_

The proposed project may present a modest increase demand for the utility services listed, but it is not expected that the project's demand will exceed existing service capacities. Project planning will include contact with the various utilities to confirm ability to provide services.

O. Energy/Natural Resources. Will the proposal result in:

	Yes	Maybe	No
1. A substantial increase in demand for existing sources of energy, fuel or water, or use of them in a wasteful manner?	___	___	_x_
2. Substantial effect on the potential use, extraction, or depletion of a natural resource?	___	___	_x_

O.1 The project will require consumption of energy and natural resources. An increase in energy consumption at the site is expected since a larger building is proposed as a replacement for the 455 Golden Gate Avenue site. However, the building will be constructed to meet energy conservation standards according to Title 24 and the California Code of Regulations.

	Yes	Maybe	No
P. Health. Will the proposal result in:			
1. Creation of a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?	___	x	___
2. Interference with emergency response plans or emergency evacuation plans?	___	x	___
3. Creation of a potentially substantial fire hazard?	___	___	x

P.1 The retrofit and remodel of 350 McAllister and the demolition of 455 Golden Gate may require encapsulation and/or disposal of asbestos-containing materials and/or other regulated building materials. Compliance with all applicable state codes and regulations will be required regarding removal and disposal of such materials, along with the requirements to notify and conform with regulations of the Bay Area Air Quality Management District (BAAQMD).

The EIR will include a discussion of the potential for encountering subsurface toxic materials or underground storage tanks during excavation. If toxic conditions are found, then appropriate analyses, handling and disposal procedures will be necessary, and will be discussed in the EIR.

P.2 Because of the many on-going and proposed projects in and near the Civic Center, the Civic Center Coordinating Committee will be consulted regarding emergency access and evacuation plans that will need to be followed during the construction of the proposed project.

	Yes	Maybe	No
Q. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	___	___	x

III. MANDATORY FINDINGS OF SIGNIFICANCE

A. Potential to degrade. Does the project have the potential to degrade the quality degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a

	Yes	Maybe	No
plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major period of California history or prehistory?	___	___	_x_
B. Short-term. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief definitive period of time. Long-term impacts will endure well into the future.)	___	___	_x_
C. Cumulative. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect on the total of those impacts on the environment is significant.)	___	_x_	___
D. Substantial adverse. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	___	_x_	___

IV. DOCUMENT PREPARERS

This Initial Environmental Checklist was prepared by:

Carol Guilbault
Associate Environmental Planner
Department of General Services
Office of Project Development and Management
400 R Street, Suite 5100
Sacramento, CA 95814
(916) 322-6945
FAX: (916) 324-4257

V. REFERENCES

City and County of San Francisco, Department of City Planning, San Francisco Main Library Final Environmental Impact Report, November 7, 1991.
ROMA Design Group, San Francisco/Oakland State Facilities Plan, prepared for the Department of General Services, Office of Project Development and Management, May 1992.

VI. PERSONS AND/OR AGENCIES CONSULTED

City and County of San Francisco
Department of City Planning
    Lucian Blazej, Planning Director
    Barbara Sahm, Senior CEQA Planner
    Carol Roos, Office of Environmental Review
    Susanna Montana, Senior Planner
    Amit Ghosh, Chief of Long Range Planning

San Francisco Landmarks Advisory Board
    Vincent Marsh

Civic Center Coordinating Committee
    Mark Dorian

State Office of Historic Preservation
    Steade Craigo

State Historic Building Safety Board
    Bob Mackensen

United States Department of the Interior
National Park Service, Western Region
    David W. Look, Chief, Preservation Assistance Branch
    Paul Alley

VII. DETERMINATION

On the basis of this initial evaluation:

___ I find the proposed project COULD NOT have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.

___ I find that the proposed project COULD have a significant effect on the environment; however mitigation measures can reduce these effects to insignificant levels. A NEGATIVE DECLARATION will be prepared.

_x_ I find the proposed project MAY have significant effects on the environment and an ENVIRONMENTAL IMPACT REPORT is required.

Date Dec. 29, 1993

Christal Waters for
Robert A. Sleppy
Supervising Environmental Planner

APPENDIX B: WIND STUDY

This summary of wind study methodology is based on the combined work of Environmental Science Associates and Bruce R. White, Ph.D., Professor of Mechanical Engineering at the University of California, Davis, whose work is independent of the University.

INTRODUCTION

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four miles per hour (mph) have no noticeable effect on pedestrian comfort. With winds from four to eight mph, wind is felt on the face. Winds from eight to thirteen mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise loose paper, dust and dry soil, and will disarrange hair. For winds from 19 to 26 mph, the force of the wind will be felt on the body. With 26 to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts associated with those winds can blow people over.[1]

In order to provide an acceptable wind environment for people in San Francisco, the City of San Francisco adopted City Planning Code requirements for wind effects. This wind ordinance is defined in terms of equivalent wind speed,[2] which is an average wind speed (mean velocity), adjusted to include the effects of gustiness and turbulence. City Planning Code Section 148, Reduction of Ground-Level Wind Currents in C-3 (Downtown Commercial) Districts and each of the Rincon Hill, Van Ness Avenue, and South of Market district. [Sec. 148, 249.1(a)(3), 243(c)(8), 263.11(c)], requires buildings to be shaped so as not to cause ground-level equivalent winds to exceed, more than 10% of the time, 11 mph in substantial pedestrian use areas, and 7 mph in public seating areas. Similarly, the Code requires that buildings not cause equivalent wind speeds to reach or exceed the hazard level of 26 mph for a single full hour of the year. The comfort criteria are based on wind speed data that are measured for one minute and averaged. In contrast, the hazard criterion is based on winds that are measured for one hour and averaged; when stated on the same time-average basis as the comfort criteria winds, the hazard criterion speed is a one-minute average of 36 mph.

The project site is located in a Public Use (P) District, in which the City Planning Code wind requirements do not apply. For the purposes of this EIR, the project will be examined in relation to the wind criteria established for the Downtown Commercial (C-3) District. The analysis herein is presented consistent with City codes and plans. The proposed project, under State jurisdiction, would not be formally subject to City codes and plans related to wind effects.

METHODOLOGY AND ASSUMPTIONS

Wind Data

The determination of mean wind speeds at street level is based on the ability to relate the wind-tunnel results with statistically representative records of San Francisco wind data. Such data describing the speed, direction, and frequency of occurrence of winds were gathered at the old San Francisco Federal Building at 50 United Nations Plaza (at a height of 132 ft.) during the six-year period, 1945 to 1950. Measurements taken hourly and averaged over one-minute periods have been tabulated for each month (averaged over the six years) in three-hour periods using seven classes of wind speed and 16 compass directions. Analysis of these data shows that during the hours from 6:00 a.m. to 8:00 p.m., about 70% of all winds blow from five of the 16 directions, as follows: Northwest (NW), 10%; West Northwest (WNW), 14 percent; West (W), 35%; West Southwest (WSW), 2%; Southwest (SW), 9%; and all other winds, 28%. Calm conditions occur 2% of the time. More than 90% of measured winds over 13 mph blow from the NW, WNW, W, WSW, or SW. Based on these data, wind tests for North of Market locations examine three prevailing wind directions -- northwesterly, west-northwesterly, and westerly -- as being most representative of prevailing wind conditions.[3]

Testing and Analysis Methodology[4]

A one-inch = 50-feet scale model of the area surrounding the proposed project for several blocks in all directions was developed by ESA. The model included all of the buildings and topographic features of the existing setting, as well as models of the project, alternatives and the potential development in the vicinity.

The model tests, conducted under the direction of Professor White, were carried out in a wind tunnel that allows testing of natural atmospheric boundary layer flow past surface objects such as buildings and other structures. This boundary layer wind tunnel has an overall length of 22 meters (m) (72 feet), a test section of 1.22 m (4 feet) wide by 1.83 m (6 feet) high, and an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 meter per second (m/s) to 8 m/s, which is 2.2 mph to 17.9 mph.

Wind-speed measurements were made with a hot-wire anemometer, an instrument that directly relates rates of heat transfer to wind speeds by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. By measuring both the mean wind speeds and corresponding turbulence intensities, high wind speeds and gustiness (changes in wind speeds over short periods of time) could be detected and the equivalent speed determined. The inherent uncertainty of measurements made with the hot-wire anemometer close to the surface of the model is plus or minus 5% of the true values. The ratio of near-surface speed to the wind tunnel's free-stream wind speed was calculated from the hot-wire measurements for each location and each wind direction.

Using the same methodology, the ratio of the wind tunnel's free-stream wind speed to the wind speed at the elevation of the reference station where the San Francisco wind data were collected had been previously determined. Then, by combining these two ratios, each wind-tunnel

measurement can be reduced to a single ratio that relates the speed of ground-level wind measured in the wind tunnel to the speed at the reference elevation on the Old San Francisco Federal Building. This ratio also includes a correction to account for the aerodynamic effects of the old Federal Building itself on the wind data.

Finally, the equivalent wind speed distributions at street level are determined by relating the wind-tunnel results with statistically representative records of San Francisco wind data, as follows. The frequencies with which a particular wind velocity is exceeded at the test locations are calculated by a computer program, which begins by selecting a relatively high value of the ground-level wind speed at one location and then uses the wind-tunnel ratios to determine the corresponding reference wind speed for each measured wind direction. In general, this gives a different wind speed for each major direction component of the reference wind. The wind record data are then used to calculate the number of times that each of the calculated direction components of the reference wind was exceeded. The sum of these events over all direction components of the reference wind yields the total percentage of time that the specified ground-level wind speed would be exceeded. The computer program then either increases or decreases the value of the ground-level wind speed, as appropriate, and runs the calculation again to determine another value. The program continues to iterate until the ground-level wind speed exceeded 10% of the time is found for the location. The program then continues the process for the next and subsequent locations until the ground-level wind speed exceeded 10% of the time is found for all test locations.

The equivalent wind speeds are compared to the comfort criteria of 11 mph for pedestrian areas and 7 mph for seating areas, each not to be exceeded more than 10% of the time. Separate calculations evaluate compliance with the hazard criterion. The wind data observed at the Old San Francisco Federal Building are not full hour average speeds as specified by the Code, so it is necessary to adjust the equivalent speeds to correctly represent the Code's hourly average of 26 mph.[5] The adjusted equivalent wind speeds are used to measure compliance with the hazard criterion.

Wind Test Sequence and Models Used

Two phases of wind-tunnel testing were carried out. The first-phase wind-tunnel tests, conducted prior to development of the proposed project design, examined the existing setting and potential future development, in various combinations with five massing alternatives for the new State Office Building. Wind speed measurements were made at up to 47 locations on the model. The alternatives tested in the first-phase included rectangular masses representing building envelopes meeting project floor area requirements, and alternatives with a series of setbacks or other articulation.

To summarize the findings of the first-phase work, a report, "Wind Tunnel Results and Design Considerations," May 1994, that included general considerations and recommendations on design to limit wind increases, was prepared and included as part of the Design - Build Guidelines issued to the three Design-Build Team finalists for the proposed project. The finalists were requested to consider those recommendations in developing the proposed New State Office Building design. The May 1994 report is included in this appendix.

The wind-tunnel data obtained in this first phase were used to identify 38 measurement points for the second phase of testing of the proposed project design. The 38 points were judged to be the locations at which winds would be likely to be affected by changes on the project site. The 38 test locations were studied for the four scenarios for three prevailing wind directions: northwesterly, west-northwesterly, and westerly. These wind conditions are the most representative for evaluation of the proposed building at a North of Market location. With the few exceptions noted in the tables and figures, all hot-wire measurements were taken at the same series of surface points around the building site for all test configurations and wind directions included in testing.

The second-phase wind-tunnel tests were conducted for four future scenarios (The project setting in its existing condition used the first-phase data): the project in the existing setting; the project with potential development; Alternative 2, a three-story shorter New State Office Building, with the existing setting; and for Alternative 2 with potential development.

The potential development scenario considered the Project and Alternative 2 in the context of potential future development in the vicinity of the project site. The under-construction San Francisco Courts Building at the northwest corner of Polk Street and McAllister Street; the potential office building at the southeast corner of Van Ness Avenue and Golden Gate Avenue; the 600 Van Ness Avenue retail-residential project, in public review; the approved 650 Van Ness Avenue retail-residential project; and the potential development of the Hastings College of the Law property at the southeast corner of Golden Gate Avenue and Larkin Streets, were included in this scenario.

STUDY RESULTS

First-phase wind-tunnel tests, completed prior to development of the proposed project design, included the existing setting, and five massing alternatives for the new State Office Building, at up to 47 measurement points.

The first-phase tests concluded that existing wind conditions in the project site vicinity can be characterized as very windy; that it appears that the existing Philip Burton Federal Building, a 300-ft. office building north of the State site, on the Golden Gate-Polk-Turk-Larkin block, controls the wind conditions in its vicinity, and creates most of the existing Hazardous Wind conditions that were measured in the tests. The first-phase tests also concluded that given the definitions and criteria in Section 148 of the City Planning Code and the existing windy site conditions, it appears that almost any larger structure that might be built on the State site would be likely to continue, or contribute to, existing exceedences of the Code's Hazardous Wind Criterion.

The locations of the measurement points and the result of the wind-tunnel study for compliance with the comfort criteria are summarized in Figure B-1 and Tables B-1 to B-2, pp. A-35 to A-37.

Throughout the following discussion, unless otherwise noted, the wind speeds reported are equivalent wind speeds, in mph, that would be exceeded 10% of the time. Exceedences of the hazard criterion are discussed in terms of the number of hours of exceedence.

EXISTING CONDITIONS

In wind-tunnel tests of the project vicinity, 29 of 38 test locations currently exceed the 11-mph pedestrian-comfort criterion. (The test locations were in the area generally bounded by Turk Street, Van Ness Avenue, Fulton Street and Hyde Street.) Equivalent wind speeds in pedestrian areas surrounding the project site range from 9 to 23 mph. (As noted, the equivalent wind speeds in the table are those exceeded 10 percent or more of the time.) Wind speeds from 12 to 18 mph, at nine of the 11 test locations in the immediate perimeter of the proposed project block exceed the pedestrian-comfort criterion. At test locations on the project block on Larkin Street and McAllister Street, existing speeds ranged from 9 to 13 miles per hour. On both sides of Polk Street near the project block, wind speeds ranged from 10 to 15 mph, with two test locations registering speeds in excess of 13 mph. Along Golden Gate Avenue on the project block, wind speeds ranged from 12 to 16 mph for four locations. At two locations in the Federal Building plaza, wind speeds ranged from 10 mph to 23 mph. Other locations on the Federal Building block have wind speeds from 13 mph to 21 mph. At two test locations at the north end of Civic Center Plaza, across the street south of the proposed project site, wind speeds ranged from 9 to 14 mph.

All test locations currently exceed the 7-mph public seating criterion, including points in Civic Center Plaza or the Federal Building plaza.

The hazard criterion is exceeded at six of the 38 test locations in the vicinity of the project site. The total time hazard criterion is exceeded is about 157 hours per year. One of the test locations exceeding the hazard criterion is located on the Golden Gate Avenue sidewalk at the proposed project site. The other five test locations exceeding the hazard criterion are in the block occupied by the Philip Burton Federal Building: On the corner of Polk Street and Golden Gate Avenue; on Golden Gate Avenue about halfway between Polk Street and Larkin Street; in the westerly part of the Federal Building plaza; near the southwest corner of the Federal Building; and at the corner of Turk Street and Larkin Street.

PROJECT EFFECTS

Hazard Criterion. With existing conditions, six locations in the project vicinity exceed the 26-mph hazard criterion, as noted above in Setting, for a total of 157 hours per year. Four of those locations are in or adjacent to the Federal Building plaza, one is at the southwest corner of Turk Street and Larkin Street on the Federal Building block, and one is on the Golden Gate Avenue sidewalk, on the project block.

With existing-plus-project conditions, there would be three hazard exceedence locations, compared to six with existing conditions. Two locations on the westerly part of Federal Building plaza, and the Turk-Larkin location would continue to exceed the hazard criterion. Two existing exceedence locations on the Federal Building block near the Golden Gate Avenue sidewalk, and the location on the project block would be below the hazard criterion with the project. There would continue to be no hazard criterion exceedences in Civic Center Plaza. The project would not cause a new exceedence of the hazardous wind criterion, and would reduce existing locations of exceedences in the vicinity, and total time of occurrences by a total of about 73 hours per year, leaving exceedences totaling about 84 hours per year.

the location on the project block would be below the hazard criterion with the project. There would continue to be no hazard criterion exceedences in Civic Center Plaza. The project would not cause a new exceedence of the hazardous wind criterion, and would reduce existing locations of exceedences in the vicinity, and total time of occurrences by a total of about 73 hours per year, leaving exceedences totaling about 84 hours per year.

Pedestrian Comfort Criterion. The wind environment with the project would be about the same, or improved overall, compared to existing conditions. Changes would range from decreases of eight miles per hour to increases of seven miles per hour (mph). Most changes would be decreases or increases of three mph or less. The project would increase winds at four locations by four to seven mph, and would decrease conditions at one location by four mph, and another location by eight mph. At test locations around the Federal Building, along Golden Gate Avenue between Van Ness Avenue and Hyde Street, on Polk Street north of Redwood Street, and on Larkin Street between McAllister and Turk, the project would reduce wind speeds, generally by one mph to three mph. Winds on Polk Street south of Redwood would increase by two mph to three mph.

At the proposed New State Office Building entrances on Golden Gate Avenue, Polk Street and Larkin Street, wind speeds would be reduced by one to three mph. At the McAllister Street entrance of the California State Building, the existing nine mph speed would be unchanged. The proposed 15th floor roof-top terrace of the New State Office Building would have wind speeds of about 11 mph. Wind speeds near the entrance of the under-construction San Francisco Courts Building, at Polk and McAllister, would be reduced, from 15 mph to 11 mph.

At test locations in the north end of Civic Center Plaza, the project would increase wind speeds at one location, from 14 mph to 17 mph, and at a second, from 9 mph to 16 mph. Locations in the Federal Building plaza would generally be reduced by one mph. One location in the easterly portion of the plaza would increase from 10 mph now to 15 mph with the project.

In relation to the City's Pedestrian Comfort Criterion, the project would cause four new exceedences of the 11 mph criterion: Near the southeast corner of the Federal Building plaza (increasing from 10 mph to 15 mph); at the northeast corner of the Van Ness Avenue and Golden Gate Avenue (from 10 mph to 13 mph); on the west side of Polk Street at Redwood Street (from 10 mph to 13 mph); and near the northeast corner of Civic Center Plaza (from 9 mph to 16 mph). At six locations, winds which now exceed the pedestrian criterion would decrease below that threshold: At the southwest corner of Larkin Street and Golden Gate Avenue, on the project block (a decrease from 12 mph to 9 mph); on Golden Gate Avenue west of Polk Avenue (from 12 mph to 10 mph); at the southeast corner of Van Ness Avenue and Golden Gate Avenue (from 13 mph to 9 mph); on the west side of Larkin Street, on the project block midway between McAllister Street and Golden Gate Avenue (from 12 mph to 10 mph); and at the northwest corner of McAllister Street and Polk Street (from 15 mph to 11 mph). Compared with existing conditions, wind speeds would increase at 11 locations, decrease at 20 locations, and not change at seven locations. Generally, wind speeds around the project block would range from nine mph to 15 mph. At 11 locations, wind speeds would decrease by up to one to three mph, but continue to exceed the 11 mph pedestrian criterion; at two locations already below the criterion, winds would decrease with the project by two to three mph.

All test locations in potential seating areas in Civic Center Plaza or the Federal Building plaza would continue to exceed the 7-mph seating criterion. A test location near the Civic Center Plaza tot lot (playground) would change from 9 mph, above the 7 mph seating criterion and below the Pedestrian Comfort Criterion, to 16 mph with the project, exceeding the pedestrian criterion.

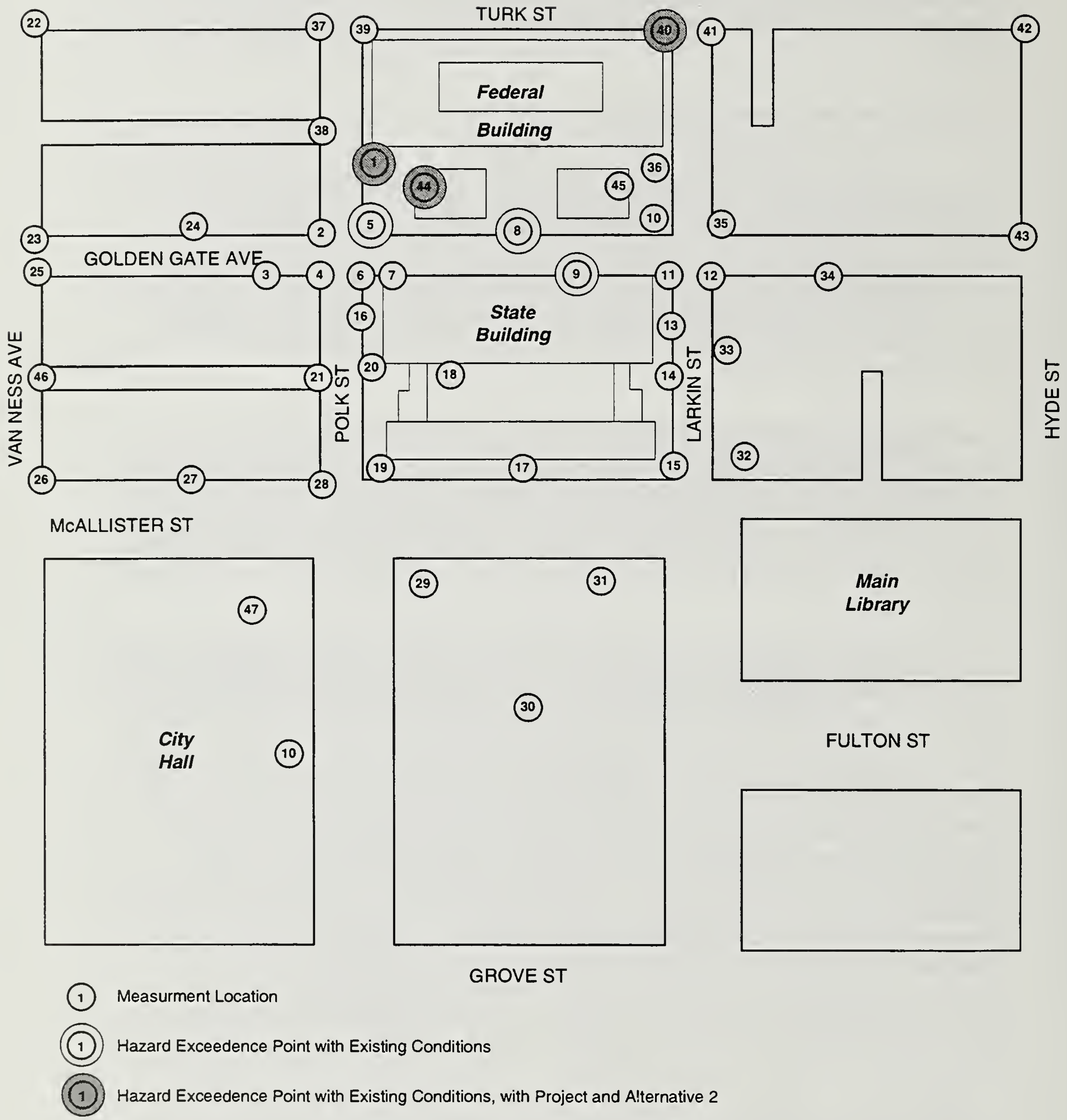
Project Plus Potential Development Effects

This tested scenario considered the project in the context of potential future development in the vicinity of the project site. The under-construction San Francisco Courts Building at the northwest corner of Polk Street and McAllister Street; the potential office building at the southeast corner of Van Ness Avenue and Golden Gate Avenue; the 600 Van Ness Avenue retail-residential project, in public review; the approved 650 Van Ness Avenue retail-residential project; and the potential development on the basis of the zoning envelope of the Hastings College of the Law property at the southeast corner of Golden Gate Avenue and Larkin Streets, were included in this scenario.

<u>Hazard Criterion</u>. As with the existing-plus-project condition, this scenario would have three locations at which the 26-mph hazard criterion would be exceeded, compared to six locations with existing conditions. The three exceedence locations would be the same Federal Building block exceedence points that would occur with the existing-plus-project scenario. The project would not cause a new exceedence of the hazardous wind criterion, and would reduce existing occurrences of exceedences in the vicinity. Total hours of exceedence would be about 80 hours per year.

<u>Pedestrian Comfort Criterion</u>. The wind environment of the project plus potential development would be similar, or improved, compared to that of the existing-plus-project case, with wind speeds increasing by up to seven mph and decreasing by nine mph from existing conditions, and increasing or decreasing by one or two mph from speeds noted for the project alone. Compared to the existing setting, wind speeds would decrease at 25 locations, increase at 10 locations and remain the same at three locations. The pattern of wind speed reduction around the Federal Building, Golden Gate Avenue, and Larkin Street, and wind speed increases in Civic Center Plaza with existing-plus-project conditions would be similar with project-plus-potential development conditions. At 17 locations, winds would be below the 11 mph pedestrian criterion, including 12 locations where the pedestrian criterion is exceeded under existing conditions. Twenty-one locations would exceed the pedestrian criterion, including four locations where winds are below 11 mph with existing conditions. (Those four points would be at the same locations as the four new exceedences with the existing-plus-project scenario, including one location in the Federal Building plaza, and one in Civic Center Plaza). This can be compared to 12 out of 38 locations that would be below the 11 mph criterion with the existing-plus-project case.

All test locations in potential seating areas in Civic Center Plaza or the Federal Building plaza would continue to exceed the 7-mph seating criterion.



NOTE: Points 1 to 47 were used in First-Phase test. Thirty-eight points tested for Project and Alternative 2 in Second-Phase. Excluded points 7, 22 24, 26, 30, 33, 38, 42, 46.

SOURCE: Environmental Science Associates; Bruce White, Ph.D.

Figure B-1
Wind Measurement Locations

Table B - 1: Pedestrian Comfort Criterion Analysis - Project

Existing Setting /1/				Project			Project + Potential Development		
Location Number	Pedestrian Comfort Criterion Speed (mph)	Measured Equivalent Wind Speed (mph) /2/	Percentage Time wind exceeds Criterion Speed	Measured Equivalent Wind Speed (mph) /2/	Percentage Time wind exceeds Criterion Speed	Change relative to existing (mph)	Measured Equivalent Wind Speed (mph) /2/	Percentage Time that Wind exceeds Crit. Speed	Change relative to existing (mph)
1	11	21	* 28	19	* 26	-1	19	* 25	-2
2	11	11	* 12	9	4	-2	9	4	-2
3	11	12	* 12	10	8	-2	10	6	-2
4	11	15	* 20	13	* 16	-2	11	9	-4
5	11	15	* 19	12	* 13	-3	14	* 18	-1
6	11	13	* 17	12	* 18	0	11	* 11	-1
7	11	15	* 26						
8	11	18	* 36	15	* 26	-3	14	* 17	-4
9	11	16	* 26	16	* 23	-1	14	* 17	-3
10	11	13	* 20	12	* 14	-1	10	8	-3
11	11	12	* 16	9	4	-3	11	* 11	-1
12	11	12	* 12	12	* 12	0	10	8	-2
13	11	9	3	7	0	-3	7	1	-2
14	11	12	* 13	10	6	-2	9	2	-3
15	11	13	* 1	12	* 13	-1	10	8	-3
16	11	14	* 25	11	* 11	-3	11	* 12	-3
17	11	9	3	9	3	0	8	1	-1
18	11	12	* 12	16	* 28	5	17	* 29	5
19	11	12	* 11	15	* 21	3	12	* 14	1
20	11	12	* 12	14	* 24	2	12	* 12	0
21	11	10	5	13	* 15	3	12	* 12	2
22	11	14	* 22						
23	11	10	6	13	* 19	4	15	* 25	5
24	11	9	5						
25	11	13	* 17	9	5	-4	11	10	-2
26	11	16	* 30						
27	11	12	* 16	12	* 15	0	13	* 17	1
28	11	15	* 25	11	* 11	-4	10	6	-5
29	7	14	* 52	17	* 63	3	18	* 62	3
30	11	16	* 28						
31	7	9	* 22	16	* 54	7	15	* 48	6
32	11	8	3	10	5	1	9	5	1
33	11	11	* 12						
34	11	11	8	11	10	0	10	9	0
35	11	14	* 25	14	* 17	-1	13	* 14	-2
36	11	14	* 22	12	* 16	-1	12	* 13	-2
37	11	17	* 36	17	* 33	0	16	* 27	-2
38	11	16	* 31						
39	11	14	* 24	14	* 25	0	13	* 21	-1
40	11	19	* 36	20	* 42	1	20	* 38	0
41	11	15	* 26	14	* 22	-1	14	* 18	-2
42	11	13	* 16						
43	11	16	* 26	8	3	-8	7	2	-9
44	7	23	* 73	22	* 70	-1	21	* 66	-3
45	7	10	* 27	15	* 49	5	15	* 50	5
46	11	14	* 17						
47	11	14	* 15	17	* 30	3	17	* 33	4

* Winds exceed criterion speed more than 10% of the time.

/1/ Existing Setting based on wind tunnel tests in April 1994.
/2/ Equivalent Wind Speed of 11 mph meets pedestrian criterion; 7 mph or less meets seating area criterion.

Source: Bruce White, Ph.D. and Environmental Science Associates

State Office Building - Wind Speed Measurements

Table B - 2: Hazard Criterion Analysis - Project

Existing Setting /1/					Project				Project + Potential Development			
Location Number	Hazard Criterion Speed (mph)	Measured Equivalent Wind Speed (mph) /2/		Number of hours wind exceeds Criterion Speed	Measured Equivalent Wind Speed (mph) /2/		Number of hours wind exceeds Criterion Speed	Change relative to existing (mph)	Measured Equivalent Wind Speed (mph) /2/		Number of hours wind exceeds Criterion Speed	Change relative to existing (mph)
1	36	45	H	48.1	43	H	27.1	-2	43	H	23.1	-2
2	36	24			18			-6	17			-7
3	36	23			21			-2	20			-3
4	36	33		0.0	28		0.0	-4	21			-11
5	36	37	H	2.6	31		0.0	-6	31		0.0	-6
6	36	28			25			-3	23			-5
7	36	28										
8	36	39	H	4.4	33		0.1	-6	32		0.0	-7
9	36	37	H	1.6	34		0.3	-3	30		0.0	-7
10	36	25			26			2	25			
11	36	23			22			-1	25			2
12	36	29			30			1	23			-5
13	36	16			13			-3	15			-2
14	36	21			19			-2	15			-6
15	36	15			21			6	18			3
16	36	31		0.0	31		0.0	0	27			-4
17	36	15			16			0	13			-2
18	36	31		0.0	31		0.0	0	29			-2
19	36	25			32		0.0	8	30		0.0	5
20	36	25			30		0.0	5	28			2
21	36	17			22			4	21			4
22	36	24										
23	36	19			23			3	27			8
24	36	26										
25	36	24			20			-3	21			-3
26	36	28										
27	36	24			21			-3	24			-1
28	36	29			19			-10	18			-11
29	36	25			32		0.0	7	30			5
30	36	28		0.0								
31	36	19			28			8	28			9
32	36	18			24			6	20			2
33	36	22										
34	36	18			24			6	26			8
35	36	32		0.0	33		0.0	1	31		0.0	-1
36	36	23			21			-2	22			-1
37	36	32		0.0	32		0.0	0	30		0.0	-3
38	36	32		0.0								
39	36	28			30			2	28			
40	36	41	H	18.8	42	H	17.1	1	41	H	17.7	
41	36	31		0.0	31		0.0	0	30		0.0	-1
42	36	27										
43	36	27			17			-10	16			-11
44	36	48	H	101.2	46	H	59.4	-3	47	H	57.8	-1
45	36	19			30		0.0	10	30		0.0	11
46	36	26										
47	36	31		0.0	29			-2	30			-1

* Winds exceed criterion speed more than 10% of the time.

/ 1 / Existing Setting based on wind tunnel tests in April 1994.
/ 2 / Equivalent Wind Speed of 36 mph or less meets hazard criterion.

Source: Bruce White, Ph.D. and Environmental Science Associates

Table B - 3: Pedestrian Comfort Criterion Analysis - Alternative 2

Existing Setting /1/				Alternative 2			Alt 2 + Potential Development		
Location Number	Pedestrian Comfort Criterion Speed (mph)	Measured Equivalent Wind Speed (mph) /2/	Percentage Time wind exceeds Criterion Speed	Measured Equivalent Wind Speed (mph)	Percentage Time that Wind exceeds Crit. Speed	Change relative to existing (mph)	Measured Equivalent Wind Speed (mph)	Percentage Time that Wind exceeds Crit. Speed	Change relative to existing (mph)
1	11	21	* 28	19	* 29	-1	19	* 26	-2
2	11	11	* 12	10	8	-1	9	5	-2
3	11	12	* 12	10	8	-2	11	10	-1
4	11	15	* 20	12	* 13	-3	11	9	-5
5	11	15	* 19	14	* 17	-1	15	* 19	0
6	11	13	* 17	11	* 11	-1	11	9	-2
7	11	15	* 26						
8	11	18	* 36	15	* 23	-3	14	* 17	-4
9	11	16	* 26	16	* 29	0	14	* 18	-2
10	11	13	* 20	11	* 10	-2	9	7	-4
11	11	12	* 16	9	4	-3	9	5	-3
12	11	12	* 12	11	10	-1	9	6	-3
13	11	9	3	7	1	-2	7	1	-2
14	11	12	* 13	10	5	-2	10	5	-2
15	11	13	* 1	11	* 11	-2	12	* 12	-1
16	11	14	* 25	12	* 12	-3	10	8	-4
17	11	9	3	9	3	0	7	1	-2
18	11	12	* 12	16	* 29	5	16	* 29	5
19	11	12	* 11	13	* 17	1	10	7	-2
20	11	12	* 12	13	* 20	1	12	* 12	0
21	11	10	5	10	6	1	10	5	0
22	11	14	* 22						
23	11	10	6	13	* 18	3	15	* 25	5
24	11	9	5						
25	11	13	* 17	8	5	-5	11	10	-2
26	11	16	* 30						
27	11	12	* 16	13	* 15	0	13	* 17	1
28	11	15	* 25	9	4	-6	10	5	-6
29	7	14	* 52	17	* 61	3	17	* 58	2
30	11	16	* 28						
31	7	9	* 22	15	* 47	6	15	* 46	6
32	11	8	3	9	3	0	8	2	0
33	11	11	* 12						
34	11	11	8	9	4	-2	11	* 11	1
35	11	14	* 25	12	* 15	-2	12	* 15	-2
36	11	14	* 22	12	* 15	-1	13	* 18	0
37	11	17	* 36	16	* 30	-1	16	* 28	-2
38	11	16	* 31						
39	11	14	* 24	15	* 28	1	14	* 23	-1
40	11	19	* 36	20	* 39	0	19	* 35	0
41	11	15	* 26	14	* 22	-1	13	* 17	-2
42	11	13	* 16						
43	11	16	* 26	7	1	-9	7	1	-9
44	7	23	* 73	22	* 72	-1	21	* 66	-3
45	7	10	* 27	15	* 51	5	15	* 52	5
46	11	14	* 17						
47	11	14	* 15	16	* 30	3	17	* 32	4

* Winds exceed criterion speed more than 10% of the time.

/1/ Existing Setting based on wind tunnel tests in April 1994.
/2/ Equivalent Wind Speed of 11 mph meets pedestrian criterion; 7 mph or less meets seating area criterion.

Source: Bruce White, Ph.D. and Environmental Science Associates

Table B - 4: Hazard Exceedance Analysis - Alternative 2

Existing Setting /1/					Alternative 2				Alt 2 + Potential Development			
Location Number	Hazard Criterion Speed (mph)	Measured Equivalent Wind Speed (mph) /2/		Number of hours wind exceeds Criterion Speed	Measured Equivalent Wind Speed (mph) /2/		Number of hours wind exceeds Criterion Speed	Change relative to existing (mph)	Measured Equivalent Wind Speed (mph) /2/		Number of hours wind exceeds Criterion Speed	Change relative to existing (mph)
1	36	45	H	48.1	42	H	20.7	-3	43	H	25.9	-2
2	36	24			21			-3	19			-5
3	36	23			21			-2	21			-2
4	36	33		0.0	27			-5	22			-10
5	36	37	H	2.6	33		0.0	-4	32		0.0	-5
6	36	28			23			-5	22			-6
7	36	28										
8	36	39	H	4.4	32		0.0	-7	34		0.3	-5
9	36	37	H	1.6	33		0.1	-3	31		0.0	-5
10	36	25			24			-1	22			-2
11	36	23			21			-2	18			-4
12	36	29			30			1	24			-5
13	36	16			15			-1	16			
14	36	21			18			-3	17			-4
15	36	15			19			4	21			6
16	36	31		0.0	29			-2	24			-7
17	36	15			16			1	14			-2
18	36	31		0.0	29			-2	30		0.0	-1
19	36	25			24			-1	23			-2
20	36	25			28			3	28			3
21	36	17			17				17			-1
22	36	24										
23	36	19			23			3	28			9
24	36	26										
25	36	24			20			-4	22			-2
26	36	28										
27	36	24			22			-3	26			1
28	36	29			17			-12	17			-12
29	36	25			29			4	29			4
30	36	28		0.0								
31	36	19			27			8	29			10
32	36	18			17			-1	16			-2
33	36	22										
34	36	18			19			1	22			4
35	36	32		0.0	31		0.0	-1	30		0.0	-2
36	36	23			22			-1	25			2
37	36	32		0.0	35		0.6	3	30		0.0	-2
38	36	32		0.0								
39	36	28			27			-1	29			1
40	36	41	H	18.8	42	H	23.3	1	40	H	10.9	-1
41	36	31		0.0	29		0.0	-2	29		0.0	-2
42	36	27										
43	36	27			14			-13	14			-13
44	36	48	H	101.2	46	H	48.7	-3	48	H	68.5	0
45	36	19			28			8	29		0.0	9
46	36	26										
47	36	31		0.0	28			-3	31			

* Winds exceed criterion speed more than 10% of the time.

#

/ 1 / Existing Setting based on wind tunnel tests in April 1994.

/ 2 / Equivalent Wind Speed of 36 mph or less meets hazard criterion.

Source: Bruce White, Ph.D. and Environmental Science Associates

WIND TUNNEL RESULTS
and
DESIGN CONSIDERATIONS

METHODOLOGY

Environmental Science Associates (ESA), under contract to the State Office of Project Development and Management, conducted a series of wind-tunnel tests in April 1994, using scale models of various building massing to determine the range of possible ground-level wind effects of development of the new State Office Building at 455 Golden Gate Avenue in San Francisco. These tests used the standard testing and analysis methods for projects in San Francisco in reviewing compliance with Section 148 of the San Francisco City Planning Code, Reduction of Ground-Level Wind Currents in C-3 Districts. The Code specifies a "Pedestrian Wind Criterion" of 11 mph, where the speed is not to be exceeded more than 10% of the time, and specifies a "Hazardous Wind Criterion," which is a one-hour average wind speed of 26 mph, not to be exceeded more than one time a year. These wind speeds that are referenced are "equivalent wind speeds" which includes and weights the effects of wind velocity and turbulence. The "equivalent wind speed" is defined in Section 148 of the Planning Code.

The major existing wind directions tested were the west, west-northwest, and northwest winds. West-southwest winds are important for sites near, or south of Market Street, but are not considered a major factor for the State Office Building site.

The wind tunnel tests included measurement of the existing conditions, measurements for five massing alternatives for the State Office Building site, and measurements of the five massing alternatives together with cumulative development (buildings under review; approved buildings; and buildings under construction) in the vicinity of the proposed State Office Building.

This report is a summary of data resulting from the wind tunnel testing and is sufficient for the interim conclusions and recommendations presented below. The complete wind-tunnel testing report will be included as part of the State Office Building Environmental Impact Report.

GENERAL RESULTS

Existing Site and Vicinity. The existing conditions of the site and vicinity can be characterized as very windy. Forty-seven locations were tested within the area bounded by Hyde Street, Van Ness Avenue, Turk Street and McAllister Street. Test location points were concentrated on the State Office Building block, Federal Building block, and Polk Street, Larkin Street, and Golden Gate Avenue near the site. Of the 47 locations tested, existing winds at 38 points exceeded the Pedestrian Wind Criterion, while existing winds at six locations near the Federal Building exceeded the Hazardous Wind Criterion.

General Performance of Alternatives. The results of the series of tests for the five massing alternatives indicate a general increase in windiness in the vicinity of the State Building site for all alternatives tested. In general, there would be more locations at which winds would

increase than locations at which winds would decrease, and, the increases in wind speed would be relatively large, ranging up to 6 mph or more, while the decreases would be usually small. While the magnitude and location of exceedances varies among the alternatives, the alternatives would each influence hazard exceedances at five or six locations adjacent to the Federal Building. As noted above, the existing conditions generate exceedances at six locations. A massing alternative that would be taller than the existing Federal Building would contribute to a hazard exceedance on the State block itself.

Effects of Cumulative Development. The testing indicates that the addition of cumulative development, by increasing the bulk of buildings on the blocks just upwind of the State Office Building site, decreases the winds at many of the locations tested. This decrease is on the order of 1 to 2 mph (for the equivalent 10% exceeded winds) for many locations, but this decrease is not sufficient to reduce the number of exceedances of either the Pedestrian Wind Criterion or of the Hazardous Wind Criterion.

INTERIM CONCLUSIONS AND RECOMMENDATIONS

It appears that the existing Philip Burton Federal Building, a 300-ft office building north of the State site, on the Golden Gate-Polk-Turk-Larkin block, controls the wind conditions in its vicinity, and creates most of the existing Hazardous Wind conditions that were measured in the wind tunnel tests.

Given the definitions and criteria in Section 148 of the City Planning Code and the existing windy site conditions, it appears that almost any larger structure that might be built on the State site would be likely to continue, or contribute to, existing exceedance of the Code's Hazardous Wind Criterion.

Incorporating the design considerations discussed below might reduce the effects of the project on winds on the State block. The design considerations would not be expected to eliminate the occurrence of Hazardous Wind Exceedances, as defined by Section 148.

POSSIBLE DESIGN CONSIDERATIONS TO MITIGATE WIND INCREASES

The major existing winds for this site are the west, west-northwest, and northwest winds. This discussion presents several conclusions and design recommendations that were drawn from evaluation of the wind tunnel test results. These conclusions and recommendations are general, and due to the complexity of the interactions of the winds with the existing structures, cannot be considered absolute design criteria. Extreme caution must be used in integrating these general statements into any actual design for the proposed building.

West Winds. For west winds, the Federal Building and the proposed State Building appear to funnel the winds between them and increase the general windiness of the Federal Building Plaza and on sidewalks on Golden Gate Avenue and Polk Street. Many of the sidewalk locations on Polk Street and on Golden Gate Avenue sidewalks around the site can be expected to exceed the Pedestrian Wind Criterion, and several locations in the Federal Building Plaza and on sidewalks around the Federal Building itself would be likely to exceed the Hazardous Wind Criterion. This funneling effect appears to cause winds in the eastern portion of the Federal Building Plaza, an area with existing wind speeds that are less than the Pedestrian Wind Criterion, to increase by 5 mph to 6 mph for all alternatives.

To reduce the funneling effect influence on Hazardous Wind and Pedestrian Comfort conditions on the Federal Building Plaza, the mass of portions of the proposed State building higher than about 60 feet above street level should be set back about as far away from Golden Gate Avenue as possible; no specific setback is identified.

To reduce pedestrian-level wind effects (winds that could exceed the Pedestrian Comfort Criterion in Section 148) along Golden Gate Avenue, the lot-line street wall along Golden Gate Avenue could be in the range of roughly 40 to 60 feet in height with a setback or setbacks above that street wall. The total depth of the setbacks should be roughly 40 feet; a setback as small as 20 feet might be effective.

(It can be noted that under Section 148 procedures for projects under City of San Francisco jurisdiction, exceptions to the requirement to avoid or minimize the effects on Pedestrian Comfort criteria may be granted. The project must demonstrate that avoiding those wind effects would result in an "unattractive or ungainly building form," or "in unduly restricting the development potential of the building site in question.")

<u>Northwest and West-Northwest Winds</u>. For the west-northwest to northwest winds, a large building on the State site together with Federal Building appears to act like a single larger building that diverts winds down Polk Street into the Civic Center area. Those diverted winds increase the wind speeds along Polk Street, along McAllister Street and in the north end of the Civic Center plaza.

Existing winds on the eastern Polk Street sidewalks are generally at or exceed the Pedestrian Wind Criterion. To limit further increases in winds there, two approaches can be considered: 1) site the new State Building back from the lot lines, with similar setback as the existing 455 Golden Gate Building; or 2) keep the height of lot-line street on Polk Street wall in the range of roughly 40 feet to 60 feet, with a setback of a roughly 20 feet to 40 feet above that street wall.

Large, uninterrupted vertical building faces (without substantive setbacks) on west and north faces of the building would intensify winds at street level. Use of setbacks, or large platforms above street level should help reduce the downward component of winds.

As is the case for the west winds, the new building and the Federal Building appear to funnel the west-northwest winds between them and increase the general windiness of the Federal Building Plaza and sidewalks on Golden Gate Avenue.

NOTES - Wind Study Methodology

1 Lawson, T.V. and A.D. Penwarden, *The Effects of Wind on People in the Vicinity of Buildings*, Proceedings of the Fourth International Conference on Wind Effects on Buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., 605-622 1976.

2 Equivalent wind speed is defined by the San Francisco Planning Code as the mean wind, multiplied by the quantity (one plus three times the turbulence intensity) divided by 1.45.

3 Arens, E., *Designing for Acceptable Wind Environment*, Transactions Engineering Journal, ASCE 107, No. TE 2, p. 127-141, 1981

4 The wind tunnel facility and test equipment, together with more details of the testing methodology, are presented in a paper by White, Bruce R., "Analysis and Wind-Tunnel Simulation of Pedestrian-Level Winds in San Francisco", Journal of Wind Engineering and Industrial Aerodynamics, 41-44, pp 2353-2364, 1992

APPENDIX C: TRANSPORTATION

TABLE C-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

Level of Service	Typical Operating Characteristics	Passengers Per Seat Ratio /a/
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with fewer than half of the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00 to 0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51 to 0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity, and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76 to 1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence, as the restricted freedom of movement for passengers requires longer loading times.	1.01 to 1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums, and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur, which can rapidly cause operations to deteriorate.	1.26 to 1.50 (*Max. Scheduled load*)
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability are extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51 to 1.60 (*Crush load*)

SOURCE: Environmental Science Associates, Inc. from *Highway Capacity Manual*, Special Report 209, Transportation Research Board, 1985.

INBOUND **N-JUDAH** – Duboce and Church
8:30 a.m., Wednesday, March 21, 1990

OUTBOUND **N-JUDAH** – Van Ness Station
5:30 p.m., Tuesday, March 20, 1990

INBOUND **38L-GEARY** – Van Ness and O'Farrell
8:35 a.m., Thursday, March 22, 1990

OUTBOUND **L-TARAVAL** – Van Ness Station
5:25 p.m., Tuesday, March 20, 1990

SOURCE: Environmental Science Associates

State Office Building EIR

Figure C-1
Photos of MUNI Peak Loading Conditions

INBOUND **14-MISSION** – Mission and 24th Streets
7:35 a.m., Thursday, March 29, 1990

INBOUND **38L-GEARY** – O'Farrell and Van Ness
8:35 a.m., Thursday, March 29, 1990

SOURCE: Environmental Science Associates

State Office Building EIR

Figure C-1 (continued)
Photos of MUNI Peak Loading Conditions

INBOUND **M-OCEANVIEW** – Civic Center Station
7:45 a.m., Thursday, March 29, 1990

OUTBOUND **J-CHURCH** – Van Ness Station
5:20 p.m., Thursday, March 29, 1990

INBOUND **K-INGLESIDE** – Civic Center Station
7:55 a.m., Thursday, March 29, 1990

OUTBOUND **L-TARAVAL** – Van Ness Station
5:45 p.m., Thursday, March 29, 1990

SOURCE: Environmental Science Associates

Figure C-1 (continued)
Photos of MUNI Peak Loading Conditions

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made used the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, *Traffic Engineering*. This method is also explained in "Interim Materials on Highway Capacity," *Transportation Research Circular No. 212*, Transportation Research Board, January 1980) The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass through an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table C-2). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio calculated by dividing the existing volume by the capacity at Level of Service E.

PEDESTRIAN ANALYSIS

Pedestrian levels of service were calculated using the Pushkarev and Zupan's *Urban Space for Pedestrians* (MIT Press, 1975). For pedestrian crosswalks, pedestrian flow rates, or the number of pedestrians passing a point per unit of time, are the basis for the flow regime designation. The flow rate is calculated using the width of the crosswalk and the number of pedestrians using the crosswalk per peak 15-minute period. Qualitatively, the flow regime indicates "the freedom to choose desired speeds and to bypass other." Table C-3 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure C-2 shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE C-2: LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service	Typical Operating Characteristics	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appear quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	0.00-0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

/a/ Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from *Transportation Research Circular No. 212*, Transportation Research Board, 1980.

TABLE C-3: PEDESTRIAN FLOW REGIMEN

Flow Regime/a/	Choice	Conflicts	Flow Rate (p/f/m)/b/
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
Design Limit - Upper Limit of Desirable Flow			
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

/a/ Photographs of these conditions are shown in Figure C-2.
/b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.
/c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: *Urban Space for Pedestrians*, MIT Press, 1975, Cambridge, MA.

The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m^2) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.

The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture have almost 130 sq ft (12 m^2) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m^2). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m^2) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.

Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m^2) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

SOURCE: Pushdarev and Zupan

Figure C-2
Photos of Pedestrial Flow Levels

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m^2). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely uncomfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.

The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m^2) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.

The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m^2) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.

The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m^2) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

SOURCE: Pushdarev and Zupan

Figure C-2 (continued)
Photos of Pedestrial Flow Levels

DESCRIPTION OF BASES FOR TRAVEL DEMAND ESTIMATES

Travel demand generated by an office building falls into two basic categories - work and non-work trips. Within those categories, there are three trip types, i.e., (1) employee commute trips; (2) employee non-commute (meetings, lunch, etc.) trips; and (3) non-employee (visitor) trips. Trip generation rates for the three trip types for this analysis were established on the basis of various data sources and professional judgment. The standard source for travel demand estimates for projects within the City of San Francisco is the *Guideline for Environmental Review: Transportation Impacts*, published by the San Francisco Department of City Planning (SFDCP). Person trip generation rates for various land uses and for different sections of the City, derived from surveys of existing buildings in the City, are presented in the *Guidelines*. It was agreed by SFDCP transportation planners, however, that data for Government Office Buildings given in the *Guidelines* are based on a limited sample size and are not representative of the characteristics of the proposed project. In the absence of ready-to-use trip generation rates for the project as a whole, various other data sources were explored to assemble trip rates for the above-identified three trip types.

Employee Commute Trips: The State Transportation Department (Caltrans) conducts an annual commute survey of employees in most State agencies. Questions asked of employees include the time of day the person starts work and the mode of travel used to commute to and from work. Data were gathered from responses from 18 State agency work sites, each of which is expected to be located at the project site as a result of the proposed project, from the most recent (1993) available survey. The gathered data represent responses from about 1,470 employees (or about 60 percent of the projected 2,500 employees in the proposed project), and include responses from employees whether they did or did not commute to/from work every day in the peak period (6 a.m. to 10 a.m., and 3 p.m. to 7 p.m.) during the survey week. Reasons for not reporting to the work site on one or more days include paid absence (illness or vacation), compressed work week, or telecommuting. The survey data reflect an average person trip generation rate for employee commute trips of 1.78 daily trips per employee, and 0.88 p.m. peak-period trip per employee. It was assumed that about 90 percent of the four-hour p.m. peak-period trips occur during the traditional two-hour p.m. peak period (4 p.m. to 6 p.m.). Using SFDCP *Guideline* information, p.m. peak-hour trips represent 60 percent of trips during the two-hour peak period. Therefore, an estimated p.m. peak-hour person trip rate of 0.475 employee commute trip per employee was established for the analysis.

Visitor Trips: Surveys were distributed to proposed agency tenants of the proposed building to determine the level of daily visitor activity associated with the uses/functions expected at the project site. Survey coverage included 37 agencies, representing about 2,400 employees (or about 96 percent of the projected 2,500 employees in the proposed project). The State agencies to be located at the project site are of the type that would not be expected to attract high levels of visitors, and the number of visitors the agencies would generate would generally remain constant throughout the year. The exception is the Franchise Tax Board, which experiences wide fluctuations in visitor levels associated with tax return/payment schedules, i.e., very high visitor levels during the March-April "crunch time" for tax returns, moderate visitor levels during quarterly tax payment periods, and low visitor levels during other periods of the year. For purposes of the EIR analysis, a moderate level of visitor activity at the Franchise Tax Board was assumed so as to represent average visitor activity for the project as a whole. On the basis of the survey responses received from the State agencies, an average daily trip rate for visitors of 0.14 person trips per employee was established. The survey data did not provide a basis for a p.m. peak-hour visitor trip rate. Using the ratio of p.m. peak-hour trips to daily trips for Government office space (i.e., about six percent), presented in the SFDCP *Guidelines*, a p.m. peak-hour rate of 0.0084 person trips per employee was obtained.

Employee Non-Commute Trips: There was no data source for trip rate characteristics associated with employee non-commute trips. For purposes of the EIR analysis, daily and p.m. peak-hour trip rates were derived using information in the SFDCP *Guidelines* and trip rates developed for employee commute trips and visitor trips. The *Guidelines* state that p.m. peak-hour office-generated trips are split 83/17 for Work/Non-Work trips, respectively. Therefore, the total p.m. peak-hour trip rate for the project would be 0.573 person trips per employee (i.e., the 0.475 employee commute trip rate per employee is 83 percent of the total trip rate, or 0.475 divided by 0.83 equals 0.573). The 17 percent non-work component of the total p.m. peak-hour trip rate would therefore be 0.098 non-work trips per employee (i.e., 0.573 times 0.17 equals 0.098).

The non-work trip rate is divided into 0.0084 visitor trips per employee (see above), and 0.0896 employee non-commute trips per employee (i.e., 0.098 minus 0.0084 equals 0.0896). Using the same ratio of p.m. peak-hour trips to daily trips for Government office space described above (i.e., about six percent), a daily rate for employee non-commute trips of 1.482 person trips per employee was obtained.

TABLE C-4: PARKING DEMAND CALCULATIONS

PARKING DEMAND RATES

Long-Term Parking Demand:

Work VTE per Day / 2 One-way Trips

Short-Term Parking Demand:

$$\frac{\text{[(Non-Work Auto PTE per Day / 1.2 Persons per Vehicle) / 2 One-way Trips]}}{\text{5 Vehicles per Day Turnover Rate}}$$

Total Parking Demand = Long-Term Parking Demand + Short-Term Parking Demand

PROPOSED PROJECT (NET NEW)

Long-Term Parking	= [877 (drive alone) + 103 (rideshare)] / 2 = 490 spaces
Short-Term Parking	= { [(1,134 (drive alone) + 370 (rideshare) / 1.2] / 2 } / 5 = 125 spaces
Total Parking Demand	= 490 + 125 = 615 spaces

SOURCE: Dowling Associates from *Guidelines for Environmental Review: Transportation Impacts* Appendix 5.1

APPENDIX D: AIR QUALITY

TABLE D-1. STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	SAAQS /a/	NAAQS /b/
Ozone	1 hour	0.09 ppm /c/	0.12 ppm
Carbon Monoxide	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 hour	0.25 ppm	NA
	Annual	NA	0.053 ppm
Sulfur Dioxide	1 hour	0.25 ppm	NA
	3 hour	NA	0.5 ppm
	24 hour	0.04 ppm	0.14 ppm
	Annual	NA	0.03 ppm
Respirable Particulate Matter	24 hour	50 ug/m^3/c/	150 ug/m^3
	Annual	30 ug/m^3	50 ug/m^3
Sulfates	24 hour	25 ug/m^3	NA
Lead	30 day	1.5 ug/m^3	NA
	Calendar Quarter	NA	1.5 ug/m^3
Hydrogen Sulfide	1 hour	0.03 ppm	NA
Vinyl Chloride	24 hour	0.010 ppm	NA

/a/ SAAQS stands for State Ambient Air Quality Standards (California). SAAQS for ozone, carbon monoxide, sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and respirable particulate matter are values that are not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

/b/ NAAQS stands for National Ambient Air Quality Standards. NAAQS, other than ozone and those based on annual averages, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

/c/ ppm = parts per million by volume; ug/m^3 = micrograms per cubic meter; NA = Not Applicable

SOURCE: California Air Resources Board, *California Air Quality Data Summary*, 1992.

TABLE D-2: SAN FRANCISCO AMBIENT AIR QUALITY MONITORING SUMMARY, 1987 - 1992

Pollutant	Standard	Number of Days Standards Were Exceeded and Maximum Concentration Measured					
		1987	1988	1989	1990	1991	1992
Ozone							
1-Hour	> 0.09 ppm	0	0	0	0	0	0
1-Hour	> 0.12 ppm	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)		0.09	0.09	0.08	0.06	0.05	0.08
Carbon Monoxide (Arkansas station)							
1-Hour	> 20. ppm	0	0	0	0	0	0
8-Hour	> 9. ppm	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)		9	9	9	8	9	8
Max. 8-Hour Conc. (ppm)		6.5	7.5	7.0	5.6	6.5	6.4
Carbon Monoxide (Ellis station)							
1-Hour	> 20. ppm	0	0	0	0	0	0
8-Hour	> 9. ppm	1	1	0	0	0	0
Max. 1-Hour Conc. (ppm)		17	15	14	12	14	10
Max. 8-Hour Conc. (ppm)		10.0	12.8	9.0	6.9	8.4	7.4
Nitrogen Dioxide							
1-Hour	> 0.25 ppm	0	0	0	0	0	0
Max. 1-Hour Conc.(ppm)		0.15	0.12	0.14	0.11	0.10	0.09
Inhalable Particulates (PM_{10})							
24-Hour	> 50 ug/m^3	4/55[a]	7/59	13/62	12/61	15/60	9/61
24-Hour	> 150 ug/m^3	0/55	0/59	0/62	1/61	0/60	0/61
Max. Daily Conc. (ug/m^3)		65	117	101	165	109	81
Particulate Sulfate							
24-Hour	> 25 ug/m^3	0/61[a]	0/61	0/61	0/61	0/60	0/61
Max. 24-Hr. Conc. (ug/m^3)		9.7	8.6	13.3	8.9	7.9	18.2

[a] x/y indicates that standards were exceeded on x days out of a total of y days on which measurements were taken that year.

conc. = concentration; ppm = parts per million; ug/m^3 = micrograms per cubic meter

SOURCE: California Air Resources Board, *Summary of Air Quality Data*, 1987-1992. BAAQMD Monitoring Stations, 10 Arkansas Street and 939 Ellis Street.

APPENDIX E: PUBLIC HEALTH AND SAFETY

HAZARDOUS SUBSTANCES REGULATORY FRAMEWORK

Hazardous materials and hazardous wastes are extensively regulated by various federal, state, regional, and local regulations, with the major objective of protecting public health and the environment. The major regulations are presented below.

FEDERAL REGULATIONS

The U.S. Environmental Protection Agency (U.S. EPA) is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include: the Resource Conservation and Recovery Act of 1976 (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (40 CFR).

These laws require that responsible parties report any known hazardous waste contamination of soil or groundwater as defined in 40 CFR to the USEPA. State and local agencies must also be informed. Any contamination that threatens the public health or environment must be remediated by the responsible party according to standards set by the USEPA. RCRA also contains regulations for the safe storage, transportation and disposal of hazardous wastes.

STATE AND REGIONAL REGULATIONS

The USEPA has delegated much of its regulatory authority to the individual states. The Department of Toxic Substance Control (DTSC) of the California Environmental Protection Agency (Cal EPA), formerly a division of the Department of Health Services, enforces hazardous materials and waste regulations in California, in conjunction with the USEPA. The DTSC is responsible for regulating the management of hazardous substances including the remediation of sites contaminated by hazardous substances. California hazardous materials laws incorporated federal standards, but are often more strict than federal laws. The primary state laws include: the California Hazardous Waste Control Law (HWCL), the state equivalent of

RCRA; and the California Hazardous Substance Account Act, the state equivalent of CERCLA. State hazardous materials and waste laws are contained in the California Code of Regulations, Titles 22 and 26.

The Regional Water Quality Control Board (RWQCB), also part of the Cal EPA, is authorized by the State Water Resources Control Board to enforce provisions of the Porter - Cologne Water Quality Control Act of 1969. This act gives the RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state are threatened and to require remediation of the site, if necessary.

The Bay Area Air Quality Management District (BAAQMD) may impose specific requirements on remediation activities to protect ambient air quality from dust or other airborne contaminants.

The California Waste Management Board regulates active, inactive or closed solid waste disposal sites and transfer facilities, as legislated under the Solid Waste Management and Resource Recovery Act of 1972.

The California Environmental Affairs Agency Office of Hazardous Material Data Management tracks sites which have been issued waste discharge requirements (NPDES permits). These sites are allowed to discharge specified levels of chemicals under their waste discharge requirements.

The State Water Resources Control Board (SWRCB) also requires permitting of all underground storage tanks (USTs) containing hazardous substances. The California laws regulating USTs are primarily found in the Health and Safety Code; combined with regulations adopted by the State Water Board , these laws comprise the requirements of the state UST program. The laws contain requirements for UST permitting, construction, installation, leak detection monitoring, repairs and corrective actions and closures. In accordance with state laws, counties are required to implement a UST program and in some cases, the county requirements are more stringent than those of the State. Cities are also given the option to implement a UST program. The Regional Water Quality Control Board may also oversee corrective actions.

LOCAL REGULATIONS

Several agencies within the City are involved in the use and storage of hazardous materials and the disposal of hazardous wastes, The San Francisco Department of Public Health, Bureau of Environmental Health and Hazardous Materials (DPH), is the primary local environmental

regulatory agency responsible for enforcement of City, state and federal environmental health codes and regulations. DPH maintains records of underground storage tank modifications and releases of hazardous chemicals from storage tanks, and records where toxic chemicals are used, manufactured and/or stored by San Francisco businesses.

DPH has the authority over monitoring the storage of flammable liquids, which includes underground tanks, and other hazardous materials, The DPH also has a memoranda of understanding with the RWQCB that gives the City local oversight authority over hazardous waste remediation activities.

The San Francisco Fire Department (SFFD), Bureau of Fire Prevention and Investigation, conducts inspections of underground storage tank installations and has permit authority over the storage of flammable liquids. The SFFD also maintains documentation of known above ground storage tanks.

The Department of Public Works administers the San Francisco Public Works Code, Article 20, "Analyzing the Soil for Hazardous Waste," known as the Maher Ordinance. This ordinance, enacted in 1986, requires an investigation of hazardous wastes in these soil as a prerequisite for building permits when "the permit for a construction project ... involves the disturbance of at least 50 cubic yards of soil...", in addition, Section 1013 of the Maher Ordinance, construction on City Property, applies to the same requirements or improvements on land under the City's jurisdiction, when no building permit is required. This local ordinance does not apply to the proposed project because the project sponsor is a State agency.

HAZARDOUS MATERIALS WORKER SAFETY REQUIREMENTS

The Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Safety and Health Administration (Cal/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the Code of Federal Regulations, Title 29 (29 CFR) as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal/OSHA standards are generally more stringent than federal regulations.

The state regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the California Code of Regulations, which contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

ASBESTOS ABATEMENT REGULATIONS

Where demolition or renovation work will involve 100 square feet or more of asbestos-containing materials, the State law requires that the contractor be certified and that certain procedures be followed.[1] Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, requires that local agencies not issue demolition permits until an applicant has demonstrated compliance notification requirements under applicable Federal regulations regarding hazardous air pollutants, including asbestos.

The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement. They are to be notified ten days in advance of any proposed demolition. Notification includes the names, addresses and phone numbers of operations and persons responsible, including the contractor; description and location of the structure to be renovated/demolished including size, age and prior use, and the approximate amount of friable asbestos scheduled starting and completion dates of demolition nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used.

According to the BAAQMD Regulation 11, Rule 2, if a structure is to be demolished, friable and potentially friable asbestos must be removed and disposed of properly. Workers and the public could become exposed to asbestos fibers as they become airborne during removal.[2]

The local office of the State Occupational Health and Safety and Health Administration (OSHA) must be notified of asbestos abatement to be carried out. Asbestos contractors must follow the State regulations contained in Title 8 of the California Code of Regulations, Sections 1529 and

341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos-containing materials. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. Pursuant to California law, the Bureau of Building Inspection (BBI) would not issue the required permit until the applicant has complied with the notice requirements above as well as requirements for proper waste disposal (described below).

LEAD BASED PAINT ABATEMENT REGULATIONS

In accordance with regulatory guidance, lead based paint waste that has been separated from building materials (such as delaminated or chipping paint) must be evaluated separately from other building materials for waste disposal purposes during building demolition. Accordingly, any chipping or delaminated paint would need to be removed before any renovation or demolition activities. Depending on the level of lead identified in the paint, it may require disposal as a hazardous waste. Building materials which still have the paint adhered to them may generally be disposed of as regular construction debris, regardless of the lead level in the paint.

The Lead in Construction Standard contained in Title 29 of the Code of Federal Regulations, Section 1926.62 applies to the removal of chipping or delaminated lead based paint. In accordance with this standard, it will be necessary for workers to wear respiratory protection until the work is completed or until an employee exposure assessment can demonstrate that air lead levels during scraping are below the permissible exposure limit (PEL). Other applicable requirements of the standard include worker awareness training, use of protective clothing, provisions for change areas and hand washing facilities, biological monitoring, and development of a site specific compliance program. California regulations relating to the abatement of lead based paint are identical to the Federal regulations.

WASTE DISPOSAL REGULATIONS

All California landfills have been segregated by regulatory authority into the categories of Class I, Class II and Class III facilities. Class I facilities can accept hazardous wastes with chemical levels below the federal land disposal restriction (land ban) treatment standards. Class II and III facilities can accept non-hazardous wastes that meet acceptance criteria determined by the State for organic and inorganic compounds; each landfill has an individual acceptance criteria.

The disposal of soil is regulated by the RWQCB and will be predicated on the concentrations of the chemical constituents that are present. Soil with total petroleum hydrocarbon or organic compound concentrations above the detection limit must be disposed of at an appropriately landfill facility or treated to reduce the levels of chemicals in the soil; the concentration of the compounds present will determine the appropriate type of disposal facility. In general, soil with total petroleum hydrocarbon levels up to 100 milligrams per kilogram can be disposed of at a Class III disposal facility. If the concentration is between 100 and 1,000 milligrams per kilogram and be disposed of at a Class II disposal facility and if the concentration is greater than 1,000 milligrams per kilogram, Class I disposal would be required.

The disposal alternative is also predicated on the total and soluble concentrations of metals. Soil with total metal concentrations that are above the Total Threshold Limit Concentration (TTLC) and soluble metal concentrations that are above the Soluble Threshold Limit Concentration (STLC) must be disposed of at a Class I disposal facility or treated.[3] The Class III landfills in the Bay Area commonly have acceptance criteria for lead that are lower than the STLC.

Soil with no concentrations of organic chemicals above detection limit and total and soluble metal concentrations that are below the TTLC and STLC may be used on-site or transported off-site as unrestricted waste.

Lead based paint would be considered a hazardous waste because the total lead concentration would be greater than the TTLC of 1,000 milligrams per kilogram. It would be necessary to dispose of the paint at a Class I facility.

The California Department of Toxic Substances Control has classified friable, finely divided and powdered wastes containing greater than one percent asbestos as a hazardous waste.[4] A friable waste is one which can be reduced to powder or dust under hand pressure when dry. Non-friable asbestos-containing wastes are not considered hazardous and are not subject to regulation under Title 22, Division 4.5 of the California Code of Regulations. The management of these wastes would still be subject to any requirements or restrictions which may be imposed by other regulatory agencies. The State standard for classification of asbestos wastes is contained in Section 66261.24 of Title 22 of the California Code of Regulations. Asbestos is not currently regulated as a hazardous waste under the RCRA; because of this it is considered a non-RCRA waste. Asbestos wastes totaling more than 50 pounds must be transported by a registered waste hauler to an approved treatment, storage or disposal facility.

Wastes containing asbestos may be disposed of at any landfill which has waste discharge requirements issued by the RWQCB which allow disposal of asbestos-containing materials, provided that the wastes are handled and disposed of in accordance with the Toxic Substances Control Act, the Clean Air Act's National emission Standards for Hazardous Air Pollutants, and Title 22 of the Code of California Regulations (Division 4.5). The Department of Toxic Substances Control also has treatment standards for asbestos-containing wastes which require submittal of a notification and certification form to the land disposal facility as well as wetting and containment of the asbestos-containing materials.

The owner of properties where hazardous waste are produced or abatement would occur must have a Hazardous Waste Generator Number assigned by and Registered with, the California Department of Toxic Substances Control in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of the material.

NOTES - Appendix E

[1] Assembly Bill 2040, Asbestos 1985, Added Section 24223 and Chapter 25 to Division 20 of the Health and Safety Code.

[2] Bay Area Air Quality Management District, Rules and Regulations, Regulation 11, Rule 2, *Asbestos Demolition, Renovation and Manufacturing*, adopted May 1981.

[3] The total threshold limit concentration (TTLC) and the soluble threshold limit concentration (STLC) are criteria used for waste classification purposes. If the waste contains a total concentration of a constituent and a concentration greater than the TTLC, it is considered a hazardous waste. If the total concentration is greater than ten times the STLC, then it would be necessary to perform a waste extraction test to determine the soluble concentration. If the soluble concentration is greater than the STLC, the waste would be considered hazardous. The waste extraction test involves a ten times dilution of the sample; because of this, it would be impossible for the soluble concentration to exceed the STLC unless the total concentration exceeded ten times the STLC.

[4] California Department of Toxic Substances Control, *Fact Sheet, Asbestos Handling, Transport and Disposal*, October 1993.